

JULY 10, 1943

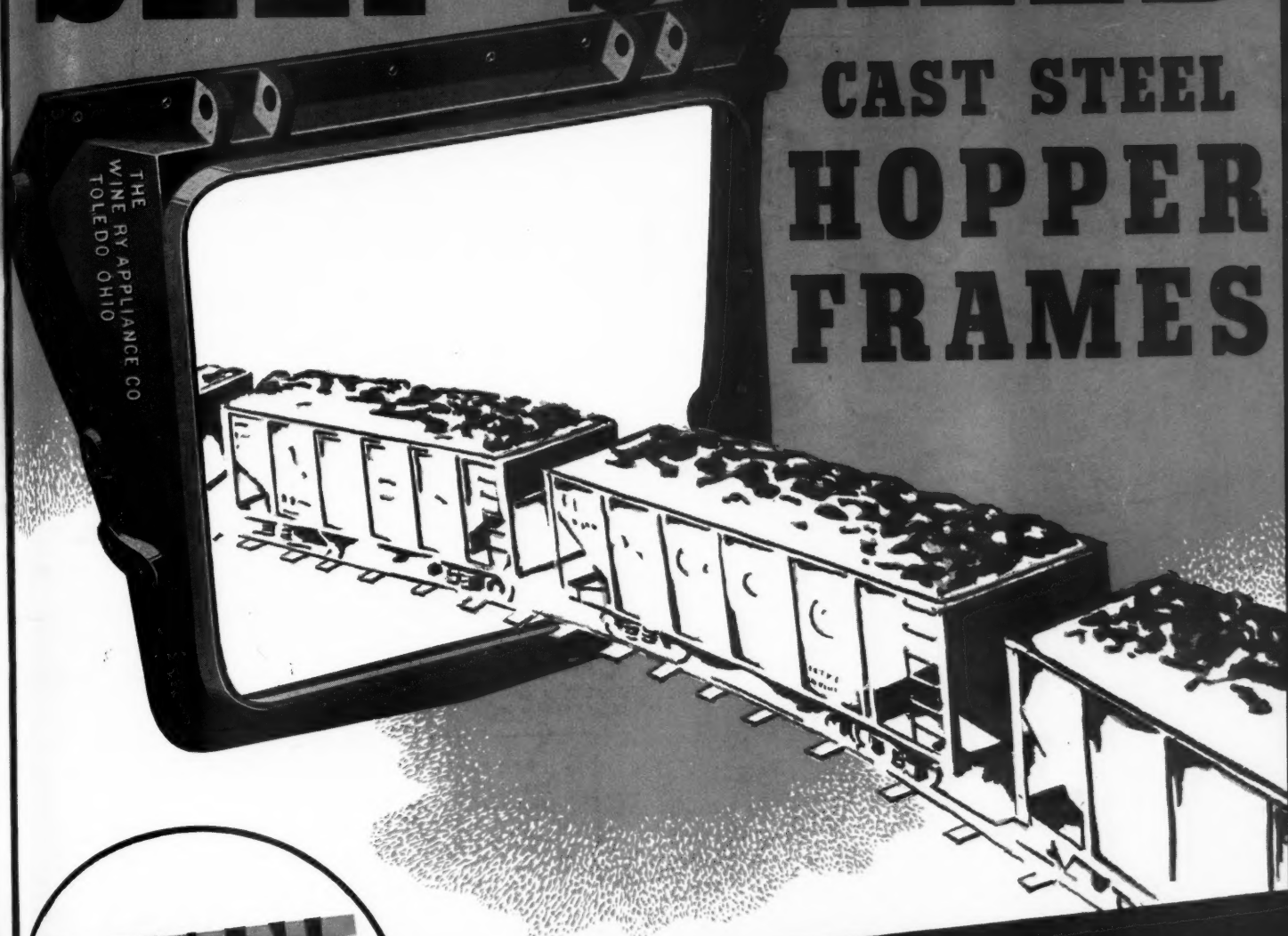
JUL 13 1943

Railway Age

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1942 CHILLED CAR WHEEL PRODUCTION:

2,682,000 Chilled Car Wheels were delivered in 1942.
885,020 Tons of metal were used to make them.

Of these:

782,181 Tons or 88.38% were scrapped wheels.

99,299 Tons or 11.22% were new pig-iron*.

3,540 Tons or .40% were alloys.

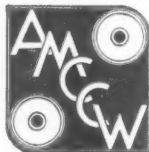
This IS Salvaging Scrap for the War Effort!

*Secured with the cooperation of W.P.B.

ASSOCIATION OF MANUFACTURERS OF CHILLED CAR WHEELS

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3351

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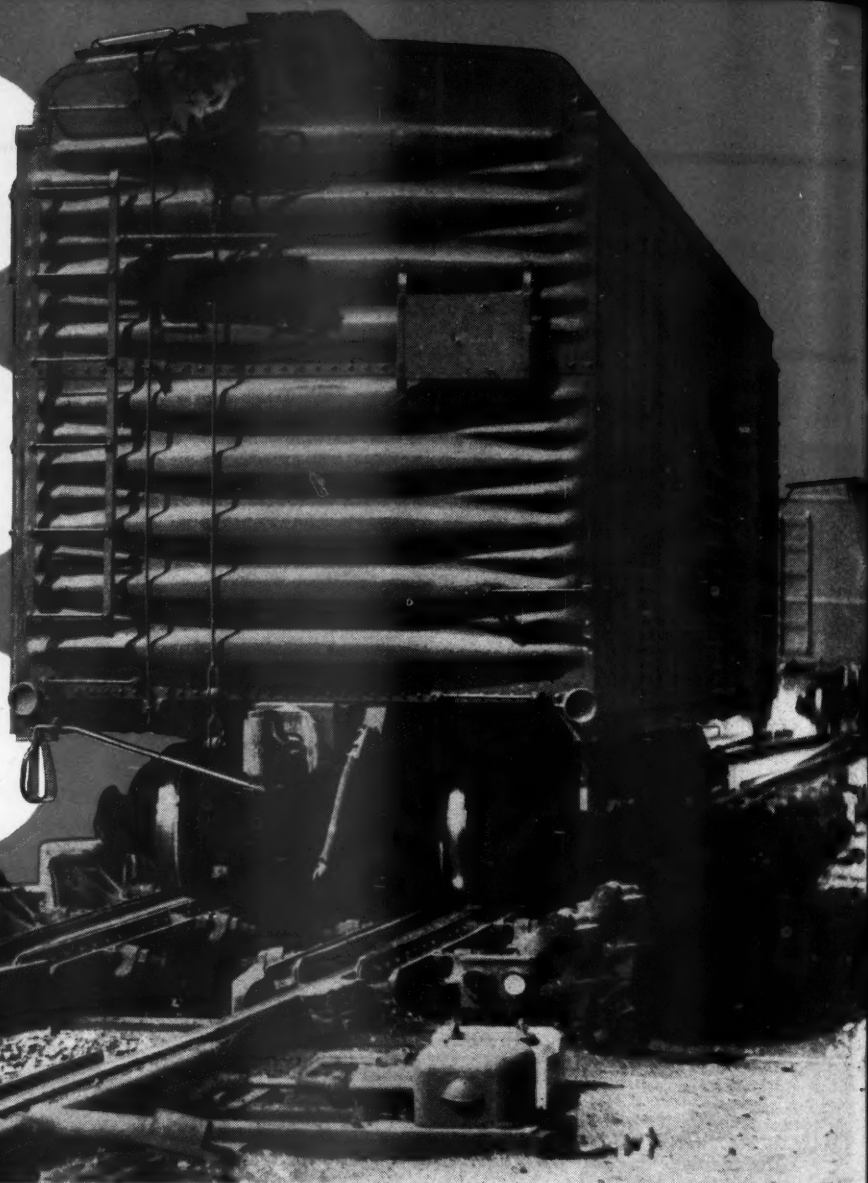
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The Week at a Glance

THEY WENT BY TRAIN: The "don't travel" advice of the Office of Defense Transportation and the railroads met an "include me out" reaction from anyone who wanted to take a train journey over the July 4 week-end. And it seems that most everybody did. So the railroads took them on and made travel history. Not every traveler had a comfortable trip; and trains were late, of course—merely bearing out that adage which has something to say about how achievement of the "impossible" takes "a little more time."

N. Y. C. RESEARCH: The New York Central's recently-adopted comprehensive research program should be of special interest to other railroads planning similar activity. With that in mind, *Railway Age* requested Vice-President R. E. Dougherty to prepare the article which appears under his by-line in this issue's feature section. He describes the organization set-up and outlines the program which contemplates participation by all departments whose problems are being studied—thus assuring practicality of the inquiry into all phases of the company's activities.

FATAL INCONSISTENCY: The New Dealers advocate a policy regarding "public works" which is at least rational and consistent compared with the irrationality and inconsistency of the policy advocated by many pretended defenders of private enterprise. The latter are often found willing to "rise above principle" when their own industries stand to benefit from government expenditures. Particularly have they promoted tax-supported transportation facilities. Meanwhile, the New Dealers consistently favor "public investment" in everything that can be called "public works." Exponents of free enterprise are advised in one of this issue's editorials to acquire like habits of consistency if they would succeed in their drive to win public support for a policy which would prevent a widespread post-war invasion of business by government-subsidized competition.

MATERIAL PROBLEMS: Materials control through proper testing and the development of emergency specifications are vital concomitants of the war effort. Recognition of that situation prompted the American Society of Testing Materials to proceed with its annual meeting this year. These Pittsburgh sessions which attracted 1,452 members and guests are covered in an article elsewhere herein. They were featured by discussions of specifications for, and methods of testing, a wide variety of materials.

BUILT FOR SPEED: Some 15 years ago the Missouri Pacific began reconstructing its Central Kansas-Colorado division, extending from Kansas City, Mo., to Pueblo, Colo., into a high-speed railway. The value of these improvements, to the country's war effort as well as to the foresighted M. P., is now being demon-

strated daily; for they are contributing much toward meeting unprecedented demands for service on transcontinental routes. The line and its operations are described in an illustrated feature article elsewhere herein.

MILLION BARRELS A DAY: The rail movement of petroleum products into the Atlantic Coast territory exceeded an average of a million barrels a day for the first time in history during the week ended June 26. The daily average was 1,060,744 barrels, topping the previous record by 63,179 barrels.

WARTIME POLICING: Luther Thomas, assistant to the vice-president of the Southern, recently told the Kentucky Peace Officers' Association how police work on the railroads has changed more since Pearl Harbor than in any other period of railroading. His address dealing with current protection problems is abstracted herein.

IMPASSE: Economic Stabilization Director Vinson's undertaking to return the non-op wage case to the emergency board, which recommended the eight cents per hour increase on the "gross inequities" basis disapproved by Mr. Vinson, has run into Dr. I. L. Sharfman's disclaimer of any authority, as former chairman, to reconvene a board which has "ceased to exist." The next move would appear to be President Roosevelt's, thus assuring adherence to that "tradition" which has brought every general railway wage proceeding of recent years to the White House for settlement.

DECREASING RESPONSIBILITY: Responsibilities and duties involved in train and engine service employment have been decreasing gradually but continuously while there has been a marked reduction in the hazards of railroad employment, according to Lehigh Valley President Revelle W. Brown. Mr. Brown was one of management's witnesses at sessions of the op wage hearing which are covered herein. The labor organizations had contended that the responsibilities and duties of their members were on the rise; but Mr. Brown drew upon his own long railroad experience to rebut the claim.

PROFITABLE HOURS: Secretary Taylor of the Eastern Railways' Bureau of Information put in some average-earnings-per-hour-on-duty figures for train and engine crews of the B. & O.'s "Capitol Limited," the N. Y. C.'s "Twentieth Century" and the Santa Fe's "Chief." Those trains' engineers, whose average wages per hour on duty are now \$3.43, \$3.89 and \$3.68, would under the demanded increase be up in turn to \$4.64, \$5.30 and \$4.99. The firemen would be up from \$2.79, \$3.12 and \$2.97 to \$4.01, \$4.53 and \$4.28; the conductors from \$2.52, \$2.78 and \$2.43 to \$3.41, \$3.77 and \$3.29 and the brakemen from \$1.89, \$2.21 and \$1.80 to \$2.78, \$3.27 and \$2.66.

NO WHEAT-CAR CRISIS: Late reports from focal points of the wheat movement indicate that there is no prospect of any undue congestion—unless now-unforeseeable complications turn up. The grain-trade committees in charge of the permit system are functioning most efficiently; while agents of the Car Service Division, the I. C. C., and the National Grain Car Conservation Committee are also keeping on top of the situation.

PARADOX: A healthy rivalry among separately-owned railroads appears not only to provide an incentive for constantly improved and more economical service to the public—but also paradoxically enough, this rivalry stimulates inter-railroad cooperation whenever such collaboration is required in the public interest. So says this issue's leading editorial, which makes its point by calling attention to the inter-railroad cooperation involved when one company, with lines blocked by accident or high water, detours its trains over the route of a neighbor.

BILL OF DIVORCEMENT: Chairman Wheeler of the Senate Committee on interstate commerce has served notice of his intention to introduce legislation which would prevent railroads from owning buses and trucks. Although some railroads have been on the highways for years, the Senator now thinks that such operations should be divorced from the railroad business. And while he was at it, the Senator pushed on to oppose railroad entry into water and air transportation, and trucking operations of express companies owned by railroads. He will offer the bill of divorcement when Congress returns from its Summer recess.

SUBSIDIES MUST SUBSIDIZE: Senator Wheeler served his notice while helping Senator Shipstead register indignation over the recent Supreme Court decision upholding an I. C. C. ruling which permitted railroads to cancel reshipping rates on grain arriving at Chicago by barge. The decision, Mr. Shipstead said, would destroy the great bulk of the grain movement on the inland waterways; and he joined in Senator LaFollette's call for prompt enactment of nullifying legislation—lest the ruling thwart what Congress had in mind when it authorized expenditures of "hundreds of millions of dollars" on waterways.

BOILER-EXPLOSION LESSONS: Denver & Rio Grande Western studies of boiler explosions have led it into investigations of improvements in materials and the effect of syphons as added safety factors. In one of this issue's feature articles, Ray McBrien, engineer standards and research, discusses these studies, particularly that bearing on the effect of temperature on the strength of materials, which has suggested the use of a steel with greater strength at high temperatures in combination with syphons.



Diver checks trench-laying of high-voltage submarine cable on ocean floor.

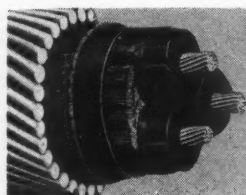
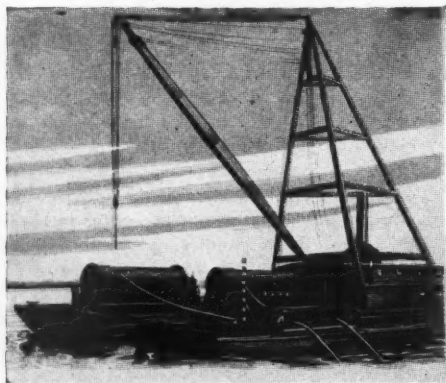
When a submarine cable goes down, it has to be right and stay that way. The cost of raising such cables for repair is prohibitive.

For many years Okonite has supplied the railroads with signal and power cables armored and protected for submarine service. They have established enviable performance records under the most severe service conditions.

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3375

RAILWAY AGE

Competition Which Promotes Co-operation

A form of voluntary inter-railroad co-operation, the extent of which is not widely appreciated, is that involved when one company, with lines blocked by accident or high water, detours its trains over the route of a neighbor. Because of recent floods in the Midwest, this expedient has been resorted to lately with extraordinary frequency. All carriers being overloaded, it has never been done with such great inconvenience to the carriers playing host. Nevertheless, such hospitality has not been curtailed; and traffic has been kept moving with no more delay or confusion than if all the railroads were under joint ownership.

Indeed, it is quite likely that traffic has moved *more* swiftly and certainly under recent flood conditions because there are a multiplicity of lines in different ownership. There are two reasons for this. (1) Under nationwide or regional consolidation many routes now open would undoubtedly be abandoned or relegated to branch-line status, which would make them unavailable for alternative emergency use. (2) Friendly inter-railroad competition, under conditions of a general flood, stimulates the individual organizations to try to make better records of satisfactory operation than their neighbors—an incentive lacking where there is no rivalry.

After a big flood afflicts a region, there is nothing which pleases the professional-minded railroader more than the opportunity to compare favorably his line's record of keeping open despite difficulties, with the accomplishments of rival lines in the same territory. This spirit of emulation is not confined to members of the official and supervisory forces, but permeates the ranks as well. Accommodating detoured trains of another railroad is not only an act of hospitality, but also evokes a certain pride because so many neighbors depend on one's own road for continued service to their customers.

Whatever the mixture of motives may be—altruistic or self-interested—the important result is that a multiplicity of available routes under separate ownership has given a large and productive section of the country uninterrupted transportation service through a difficult period of climatic irregularity. Railroads with their own tracks only just restored to service, hobbled with slow orders, and needed for their own trains, have nevertheless gladly accepted the trains of competing railroads—and supplied scarce labor to “pilot” them.

A nation desiring the most economical and reliable performance from any industry or utility will take care not to obstruct or destroy the incentives conducive to this objective. A healthy rivalry among separately-owned railroads appears not only to provide an incentive for constantly improved and more economical service to the public—but, also paradoxically enough, this *rivalry stimulates inter-railroad co-operation* whenever such collaboration is required in the public interest.

Efficiency
FOR VICTORY

Patchwork Repairs Not Universally Applicable

The campaign conducted by the War Production Board in favor of patchwork repairs of railway equipment rather than the complete renewals required to effect durable restorations of useful service is, within limits, justified as a measure for the conservation of critical materials. If it is not to be the source of serious trouble, however, it must be applied as a doctor applies his remedies—after a diagnosis of each patient. It cannot be prescribed in all cases without the most serious consequences to effective railway service.

Patchwork repairs may be continued for a long time on some types of freight cars without seriously affecting their serviceability except for the loss of availability caused by frequent returns to the repair track. Sooner or later, however, complete rebuilding with extensive material replacements becomes necessary. But there is at least one type of rolling stock to which the patchwork method is rarely if ever applicable. That is the refrigerator car. Thousands of these cars are engaged in the movement of perishable food products from one end of the country to the other. Any reduction in their efficiency means an increase in spoilage of products which, according to all accounts, are not going to be too plentiful at the source.

Most of these cars have wood superstructures, consisting of lining, posts and braces, seated in metal sockets at sill and plate; insulation, and sheathing. Much ingenuity has been exercised in the design of details and great pains taken in the process of construction to insure the unbroken continuity of the insulation in walls and under roofs and floors. Except, perhaps, to doors, hatches, roofs and occasional raked sheathing, few repairs requiring the replacement of materials need be made to the bodies of these cars during their life. When they begin to show the need of general repairs, however, it is because the side sills and the bottom ends of the side-frame members have been destroyed by decay. Even if it were possible to effect local repairs to these members without completely dismantling the car body, such repairs would be ineffective because the wracking of the body resulting from the failure of the connections between side frame and sill has destroyed the continuity of the insulation. Removal of the sheathing from a car in this condition will disclose insulation of the blanket type torn in every panel and insulation of the wool type crumbled or settled. Even the side plates in some of these cars will have been split and rendered useless for further service by the wracking to which the entire structure has been subjected.

There is no place for patchwork in a repair program for restoring the serviceability of these cars. They must be rebuilt completely. To place dependence on a refrigerator car the insulating effect of which has been reduced to a fraction of its normal value is to

entail a high percentage of spoilage both summer and winter. Its maximum insulating value in perfect condition will be none too great as manpower shortages make reicing services uncertain and the number of military movements increase its time in transit.

M. of W. Expenditures—Increase Largely On Paper

Every railway officer in charge of maintenance of way and structures knows that while unusually large programs are now in progress no true measure of the volume of effective work that is being done is to be found in the monthly figures of maintenance of way and structures expenditures now being issued by the Interstate Commerce Commission.

In the first three months of 1942, according to I. C. C. figures, expenditures for maintenance of way and structures of the Class I railways aggregated \$151,875,348, and in the first three months of the current year \$225,500,631, an increase of 48.5 per cent. With freight gross ton-miles, including locomotives and tenders, up about 18 per cent, the reported increase of 48.5 per cent in maintenance of way and structures expenditures suggests the conclusion that the upkeep of the tracks and structures is more than keeping pace with demands. But these figures are highly misleading.

In former years the figures of the I. C. C. for maintenance of way and structures expenditures, except for retirement charges, represented substantially the cost of the labor and materials used in the upkeep of the fixed properties. But optional from January 1, 1942, and mandatory as of January 1, 1943, a new method of depreciation accounting was adopted by the Commission, which calls for group depreciation of roadway structures, in lieu of unit depreciation, and requires that depreciation on depreciable roadway facilities be charged currently to maintenance of way and structures.

Effective July 1, 1942, another I. C. C. ruling introduced a second new factor—deferred maintenance—which, likewise, does not represent current expenditures. Still another element introduced by a ruling effective January 1, 1942, which does not represent current expenditures, is for amortization of defense projects. A fourth factor tending to distort the picture is that whereby the new depreciation accounting system eliminates from the maintenance accounts the former retirement charges on now-depreciable property.

As a result of all these changes, the current monthly unadjusted maintenance expenditure figures of the I. C. C. are not readily comparable with the corresponding monthly figures of previous years. The extent of this disparity is shown by comparison of the maintenance expenditures reported for the first three months of 1942 and 1943. No exact comparison can be made, because for the two largest purely bookkeeping charges—amortization of defense projects and de-

preciation—the specific amounts charged to maintenance cannot be determined.

In the first three months of 1943, the charges for amortization of defense projects amounted to \$16,976,771 more, and for depreciation (of maintenance of way and of equipment) to \$23,211,604 more, than for the like period in 1942. Assuming that one-third of the increased charges for amortization are properly chargeable to maintenance of way and structures, and that the entire *increase* in depreciation charges in the 1943 period is due to the change from retirement to depreciation accounting, it would appear that expenditures for actual maintenance of way and structures in the first three months of 1943 were approximately 29 per cent, or \$44,754,756, more than in the corresponding period of 1942, as compared with the increase of 48 per cent, or \$73,625,000, indicated by reports of the I. C. C.

In the light of the great need for additional maintenance work to meet the heavy demands of traffic, all who are concerned about the welfare of the railways might wish that it could be correctly said that current expenditures for actual work done were up 48 per cent over last year. But facts alone count, and the facts indicate an increase of only 29 per cent.

Fortunately, the Commission is taking steps partially to correct the confusing situation. Instructions have been issued, which, beginning with July, will break down the accounts for maintenance of way and structures, the depreciation charges and those for the amortization of defense projects. But the Commission should go a step further and show in its monthly reports the charges to maintenance that have been made for retirements. Only thus can a true picture be given of actual expenditures, and accurate comparison be made possible with previous years.

Emergency Bearings

The railroads were quick to act when the call came after Pearl Harbor to conserve critical materials. Prompt redesigning of the standard A. A. R. journal bearings, for instance, made it possible to conserve large amounts of copper and tin. These war emergency bearings were first placed in service less than a year and a half ago. While many of them have been applied, this has largely been done one at a time, as worn and defective bearings were replaced. They are thus spread widely and thinly over the continent and for this reason it has been difficult to follow their performance closely or critically. Meantime the Mechanical Division, A. A. R., has continued its studies and research, with a view to making further modifications or changes.

There have been some criticisms of these bearings. It must be admitted that the change in design was quite considerable, but apparently—and in light of what has followed—it was well worth trying because of the large amounts of critical materials involved. There

are some who question whether it is wise to reduce the thickness of the lining from one-quarter inch to one-eighth inch. This softer material, which allows the bearing to adjust itself more readily, is ample when used on new and full-sized journals. The allowable tolerances for wear, however, are such that when the new bearing is applied to a journal worn near the limit, the lining may be cut through at the crown before the bearing has adjusted itself for service.

A relatively small amount of critical material is required for these linings, and there is a question as to whether it might not be well worth while to increase their thickness. With the more intensive use of freight cars and the fact that insufficient new equipment is scheduled for building, there would seem to be justification for liberalizing the design, so far as critical materials are concerned, and thus insuring a greater factor of reliability in the maintenance and safe operation of the equipment.

Business Inconsistency Regarding "Public Works"

The New Dealers advocate a policy regarding "public works" which is at least rational and consistent compared with the irrationality and inconsistency of the policy advocated by many pretended defenders of private enterprise. The New Dealers favor "public investment" in everything that can be called "public works" to the limit of their ability to secure appropriations. They accept no known limitations on the kinds of plant and facilities to be built, operated and maintained at the expense of the taxpayers. Before and since the advent of the New Deal, the federal, state and local governments, largely due to the influence of selfish business interests, have extensively invaded the economic domain formerly largely occupied by private enterprise—especially that of transportation, by huge expenditures on inland waterways and on highways suitable for commercial transportation. The New Deal has not only vastly increased the government "investment" in transportation, but invaded as well other economic areas (electric power and housing, for example) which, until it came along, had been reserved to private capital.

Now, with billions of dollars of federal funds invested in war plants which can easily be adapted to the production of civilian goods, prominent New Dealers are favoring the continuance of such plants in post-war public operation, regardless of their earnings, in order to provide employment at wages which would be largely determined by the political influence of their employees.

Faced with the prospect of tax-supported competition by these government-owned plants, the nation's business and industrial leaders are alarmed and are conducting a campaign of education to convert the

voting public to support of a policy which would prevent this invasion of business and industry by government-subsidized competition.

It is to be hoped that this educational campaign will succeed. If it does not, the country may rapidly degenerate into a socialized state, with much or all productive facilities and jobs in control of politicians and bureaucrats. But many of the business leaders who are preaching the principles of free enterprise are dangerously weakening the effectiveness of their effort by failing to apply their principles consistently.

If it be true (as it undoubtedly is) that the nation's economic resources can be channeled into most effective use only by the profit motive—with freedom from government interference, either by assistance or repression—then this principle applies just as truly to transportation as to the steel or the grocery business. And too many teachers of free enterprise expound the general principle, and then spoil the argument by adding, in effect: "But please apply the principle only to manufacturing and merchandising, not to transportation. We want the taxpayers greatly to increase their expenditures on superhighways, river improvements and airports, in order that we may benefit by the subsidizing of competition with the railways."

The New Dealers do not confuse their hearers and weaken their case by such inconsistency. Their philosophy is one easy for the simple-minded to comprehend. They advocate putting the government into any business for which the appropriations can be secured, and thereby creating as many jobs as possible. They are even so consistent that they favor the government acquiring the tracks and terminals of the railways in order that it may spend billions of the taxpayers' money on them as well as on highways, waterways and airways. The government already owns the highways, the waterways and a large interest in the airways. Consequently, there can be no rational objection to government expenditures upon them if they create only facilities for the use of which the users will be required, and can afford, adequately to pay. But *such government expenditures must be made a charge on the users, and not upon general taxes and the public credit.* Otherwise, the private capital in transportation will be subjected to ruinous rivalry unless the railroads also are subsidized, which no advocate of private enterprise favors.

By the adoption of the single, simple limitation on their program that the commercial users of any kind of facilities provided by government should be required to pay adequately for the use, advocates of free enterprise can remove the fatal inconsistency in the doctrine that many of them are expounding to the public—which, as so far stated, does not apply to transportation the principles and policies insisted upon for other industries. Exponents of free enterprise cannot hope to succeed in their campaign if they stultify themselves by advocating for their own industries policies the opposite of which they favor for other industries.

There Will Be A Tomorrow

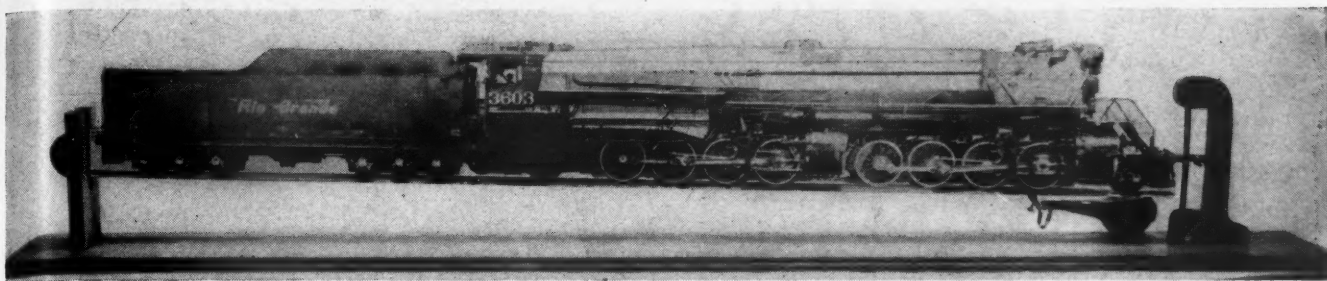
The railways are now entering the period of supreme test in handling passenger travel, as the vacation traffic is added to the load that has already taxed many roads to the limit in recent months. In many ways, they are facing insurmountable obstacles to the maintenance of proper service. Overcrowding and inability to provide reservations of the character and on the trains desired are inevitable, when the number of persons who desire to travel exceeds the capacity of the facilities available.

Meanwhile, with food-rationing regulations in effect, the maintenance of pre-war menus on dining cars is also out of the question. And the great increase in the volume of freight traffic and the importance of so large a part of it to the nation's war effort, make the maintenance of schedules by passenger trains increasingly difficult if not impractical. These conditions are understood by most of the public, and it is accepting them with surprising tolerance.

But these are not all of the changes in service which passengers are experiencing. In ticket offices, in dining cars and among train crews, there is a let down in the attitude of employees. It is true that the ticket clerks are harassed by none-too-patient patrons; it is true, also, that it is not easy to tell a person that the accommodations that he desires are not to be had; but this affords no excuse for the "you are lucky to get any space," and "we are in a war" attitude that is now being experienced in so many ticket offices. In dining cars, there is too much of the same "take it or leave it" attitude.

Even though the demand for transportation now exceeds capacity, and even though the railways have lost many of their experienced employees, there can be no excuse for discourtesy to patrons. Discourtesy is by no means universal; it is to the credit of most employees that they are rising to the demands. But discourtesy is sufficiently widespread to cause concern for the future, and to challenge the attention of railway managements, and particularly of their passenger traffic officers. No phase of the passenger problem is more important. And the fact that conditions are better on some roads than on others indicates that some are giving more attention to the problem and attaining greater success in dealing with it.

The congestion of passenger traffic will be of limited duration. Railway officers realize that the present overload will give way at the termination of the war to the most acute competition for business that the roads have ever faced. They should realize as fully that the extent to which they will be able to meet this competition is being determined in no small degree by the attitude being created among those who are being forced to use the trains now, and initiate more intensive supervision to insure that employees will so serve passengers as to tend to cause them to prefer the railways hereafter. There will be a tomorrow when the memories of today will count for much.



Locomotive Model Which Shows Changes in the Level of the Water in the Boiler on Varying Grades

Lessons from Boiler Explosions*

Steel with superior physical properties at high temperatures and syphons both contribute to safety

By Ray McBrian

*Engineer Standards and Research, D. & R. G. W.,
Denver, Col.*

BOILER explosions, as so termed on railroads, are generally due to overheating of the locomotive firebox crown sheet under low water conditions. There are other causes which occur at rare intervals, such as breakage, defective material, corrosion-fatigue, strain aging and, as in the case of stationary boilers, intergranular embrittlement.

In the February, 1943, issue of the *Railway Mechanical Engineer*, John M. Hall, director of the Bureau of Locomotive Inspection, called attention to the increases in boiler explosions which had occurred since the last fiscal year of the bureau as closed on June 30, 1942. Seventeen such explosions had occurred since last July 1, which resulted in the death of 14 experienced enginemen, firemen and trainmen, and serious injury to 46 others. He stressed the importance of enginemen and firemen being alert with respect to the water level in the locomotive boiler.

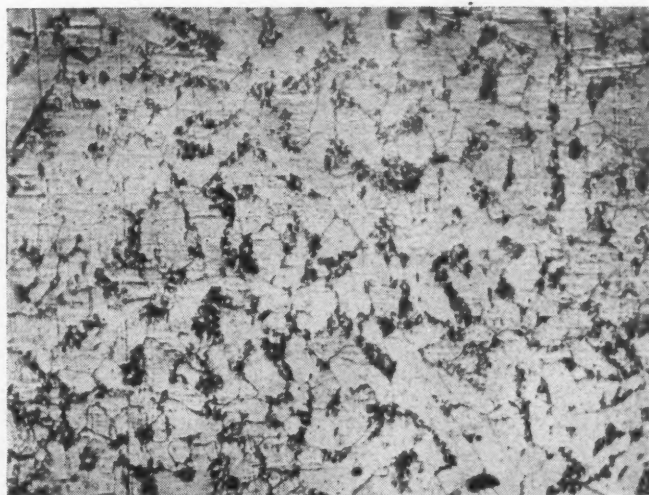
Boiler Model Helps in Educational Campaign

In connection with an educational campaign, the Denver & Rio Grande Western has constructed and is using a hollow model of a locomotive boiler so that enginemen on this road may actually see what happens to the water level in a locomotive on changing grade. The model is approximately 3½ ft. long, and made from plywood and celluloid. A side view of a locomotive was enlarged, as shown in one of the illustrations, to the desired size, and pasted on ⅝-in. plywood. The outline was cut out and the resulting engine mounted on a pivot so that it can be set to any grade from plus four to minus four per cent. An outline scale model of the upper half of the boiler was built from ¼-in. celluloid glued with acetone. The boiler is complete with crown sheet, brass rods for the upper flues, steam dome and water glass. Outlines of the dry pipe and fountain pipe are pasted in proper location on the rear. A large rubber bulb

with hose connection and pinch clamp, connected to the boiler, allows variation of the water level in the boiler. A table of ruling grades is pasted on the base, together with operating instructions.

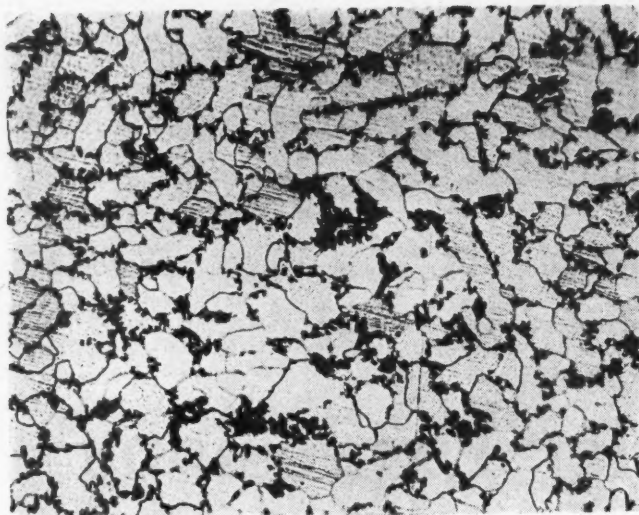
It is the intention to have each engineman individually inspect and operate the model to see the effect of grade on water level.

In addition to this type of educational campaign, investigations as to improvements in materials and the effect of syphons as added safety factors are being studied. In fact, the purpose of this paper is to discuss briefly one phase of metallurgy which may not be generally understood, namely the effect of temperature on the strength of materials, and to suggest that by the use of a steel with greater strength at high temperatures in combination with syphons, an added factor of safety is introduced. The study of an explosion which occurred on the D. & R. G. W. some time ago, and of a low water

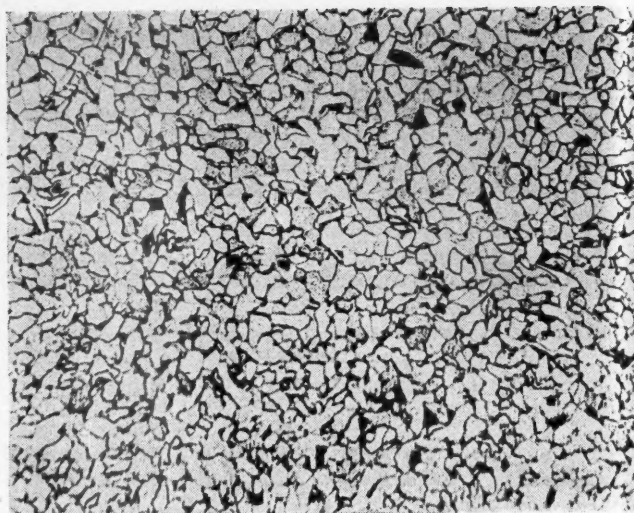


Microstructure (200 Diameters) of a Crown Sheet Heated to a Maximum Temperature of 1,350 to 1,400 Deg. F.

*An abstract of a paper presented at the annual meeting of the Association of Railway Claim Agents held June 16 at the Hotel Sherman, Chicago.



Microstructure of Comparative Piece of a Crown Sheet Heated to 1,350 Deg. F.



Microstructure of the Same Sheet Heated to 1,650 Deg. F.

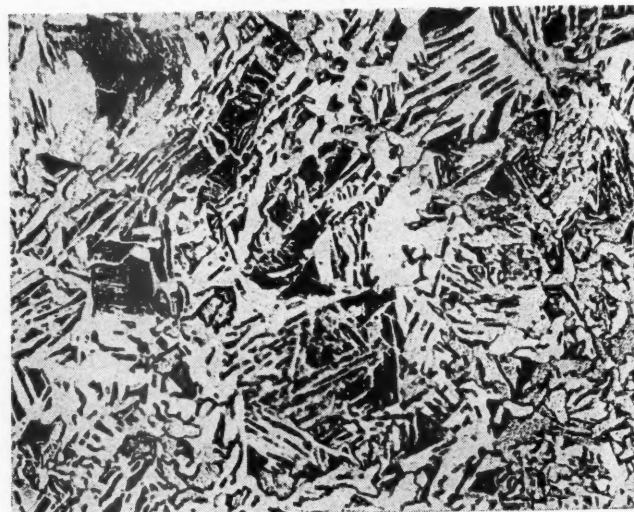
condition which resulted only in the bagging of such an alloy steel in locomotives equipped with syphons, brought out these facts very forcibly.

It should be understood that, at room temperature, metals behave similarly to a rubber band, increasing in length when a load is applied, and returning to their original length when the load is removed. This increase in length is directly proportional to the load applied, as long as loads are within the elastic limit of the metal.

At high temperatures, the behavior of metals is different. When loaded, they increase in length and the stretching continues at a fairly constant rate, eventually increasing with reduced section until failure occurs. This reduction of section, or stretching of metal, is found when overheating occurs, and in our investigation of the explosion mentioned, this was the case. Metallurgical examination was made of the failed material under the microscope.

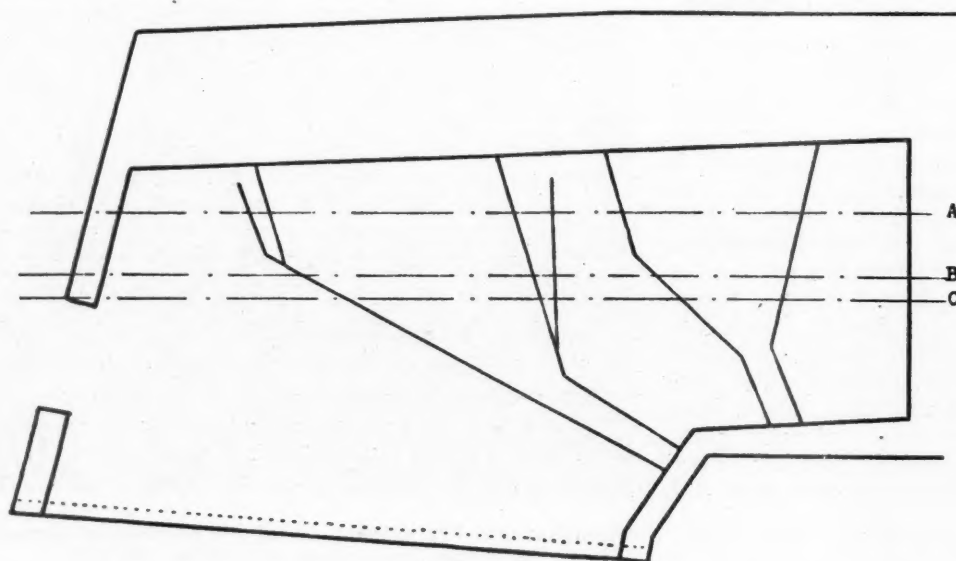
The microstructures found at various locations around the firebox showed that maximum temperature was reached at a point coincident with the origin of the explosion and established the maximum temperature as between 1,350 and 1,400 deg. F.

Another illustration shows the microstructure of a portion of the crown sheet which had been heated to



Microstructure of the Same Sheet Heated to 1,800 Deg. F.

this temperature. For comparison, pieces of the crown sheet were heated to 1,350 deg. F., 1,650 deg. F., and to 1,800 deg. F., as shown in the three other microphotographs.



Sectional Drawing Showing Various Water Levels at Which Syphons Continue to Function

The effect on the microstructure of heating to these different temperatures is shown, and by the comparison with these photographs the temperature to which the crown sheet had been heated was determined. The structure obtained by heating to 1,350 deg. F., was almost identical to that shown in the crown sheet sample. All of the micrographs were made at 200 diameters.

Carbon-Molybdenum Steel Resists Heat Better

To determine the strength of the crown sheet at the temperature at which it failed, tensile tests were made at 1,385 deg. F. Tensile tests were also made of car-

Results of Comparative Tests of Two Steels at 1,385 deg. F.

	Tensile strength, lb. per sq. in.	Elongation, per cent in 1 in.
A. A. R. carbon firebox steel.....	5,600	98.5
A. S. T. M. A-204 firebox steel (Carbon-molybdenum)	13,400	128.0

$$\text{Using formula } S = \frac{Pa^2}{4T^2} = 8,000 \text{ lb. per sq. in.}$$

Where S = maximum working fiber stress, lb. per sq. in.

P = boiler pressure, = 280 lb. per sq. in.

a = staybolt pitch = 4 in.

T = thickness of plate = $\frac{3}{8}$ in.

bon-molybdenum firebox steel at this same temperature, for comparison. The molybdenum content of the firebox steel was 0.50 per cent. The results of these tests are given in the table.

They indicate that the tensile strength of the crown sheet where it failed was approximately 5,600 lb. per sq. in., or only one-ninth the value at room temperature. The carbon-molybdenum firebox steel at this temperature had a tensile strength of 13,400 lb. per sq. in., or more than double the strength of plain carbon steel. To demonstrate that the reduction in strength due to overheating alone could cause the failure of this firebox, the calculations were made, using the formula shown under the table. A $\frac{3}{8}$ -in. plate and a staybolt pitch of 4 in. give a working stress of about 8,000 lb. per sq. in. for 280 lb. boiler pressure.

From the high temperature tests, it was shown that for the plain carbon steel the strength at 1,385 deg. F. was only 5,600 lb. per sq. in., or 2,400 lb. per sq. in.

lower than the working stress at that temperature. It was found then that the boiler pressure alone was sufficient to cause failure when the temperature of the crown sheet approached 1,350 deg. F. Also it was found that the molybdenum steel, due to its higher strength, would not have failed at this working stress and the temperature of 1,385 deg. F. reached in the crown sheet.

The effect of the use of such alloy steels is to provide an additional factor of safety through the strengthening of the steel at the higher temperatures. Along with these metallurgical studies, a test was made on a scale model firebox to show the action of syphons under low water conditions. The model was one-eighth scale of a locomotive equipped with five syphons, three in the firebox and two in the combustion chamber. The test demonstrated that the syphons will function after the water level is below the crown sheet and that the firebox syphons function after the combustion chamber syphons have ceased to discharge water over the crown sheet. The results of this test are given in a sectional drawing which shows that when the water level A was reached, the top row of tubes adjacent to the back flue sheet became dry. When the water level was at B, part of the crown sheet in the combustion chamber and next to flue sheet became dry. When the water level reached C, most of the crown sheet in the combustion chamber became dry, the firebox syphons continuing to function.

Such investigations aid in securing better materials and in preventing the occurrence of explosions, but, as stated editorially in the June Railway Mechanical Engineer, enginemen persist in trying to restore low water in face of extreme danger, which leads to the following questions:

"Are enginemen generally aware of the extremely narrow margin of time in which they can be sure of safety after the water first disappears from the bottom of the water glass, and also how many railroads have formulated definite rules of action embodying safe procedure to be followed when low water emergencies present themselves?"

Such questions are pertinent as well as the studies to improve materials and appliances, and warrant a continual definite campaign and vigilance to prevent low-water explosions.

* * *



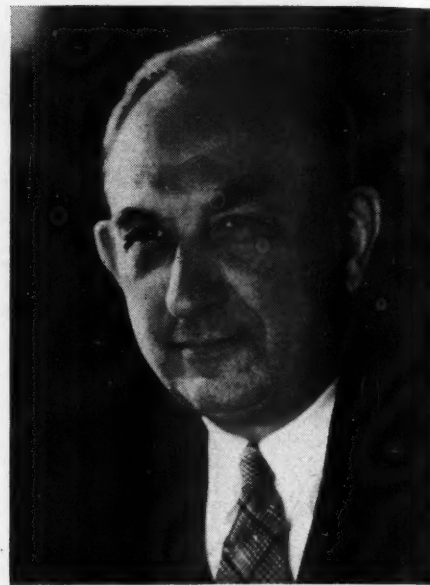
One of the General Electric 80-ton, 500-Hp. Diesel-electric Locomotives Now in Service on the Northeast Oklahoma—Which Serves the Lead and Zinc Mining Districts of Oklahoma

N. Y. Central's Research Program

Participation by all departments whose problems are being studied assures the practicality of inquiry into all phases of the company's activities

By R. E. Dougherty

Vice-President, New York Central



R. E. Dougherty

THE reference in the New York Central's annual report to its stockholders for 1942, that it has launched a research program to deal primarily with post-war problems, has aroused considerable amount of interest. This program is designed not only to chart the policies of the future in connection with the marked changes that are expected in transportation following the war, but also to bring about in a more intensive way improvements in present operations of the railroad.

The general supervision of the program is centered in a Research Council which is a committee of nine executives. The chairman is R. E. Dougherty, vice-president, improvements and development. Members are M. J. Alger, vice-president (traffic); J. Aronson, vice-president (law); T. P. Healy, general solicitor; P. W. Kiefer, chief engineer, motive power and rolling stock; C. W. Meyer, assistant to president; L. V. Porter, vice-president and comptroller; W. F. Schaff, vice-president (West of Buffalo); A. H. Wright, vice-president and general manager (Buffalo & East); and B. S. Voorhees, assistant vice president and secretary of the Council. A. D. Wolff, Jr., was appointed research engineer and devotes his full time to administrative and other work pertaining to the Council.

It was concluded that the program was of such importance as to warrant placing it in the hands of the company's responsible officers; and, rather than setting up an entirely new organization, it was deemed advisable to center the work in the office of the vice-president, improvements and development, which office had been handling for a great many years problems requiring analysis and economic study, which would largely be characterized as "research". Inasmuch as it was recognized that the work would, to a very considerable extent, cut across departmental lines, it was decided that it could best be accomplished by inter-departmental co-operation through committees, rather than by delegation to a centralized staff.

It was the belief that the best method of assuring success would be to make certain that such men as are best qualified by training and experience in each department should be set apart from their regular duties to devote their entire time to research work, but that

they should be under the direction of the responsible heads of their departments.

Even though it was recognized that the responsible executive officers of the company would be intensely occupied with their regular duties, nevertheless it was deemed essential that they give their most careful thought and consideration to the research problems as occasion might require.

Each committee includes representatives of all departments that are interested in or affected by the committee's work. Wherever the volume of committee work requires it, one or more men from the department most concerned are assigned full time to research projects being studied by the committee. Generally these men are from the same department as the committee chairman.

Work of the various committees is co-ordinated with the Research Council, in that one or more Council members are on each committee and either Mr. Voorhees or Mr. Wolff is on practically every committee. The chairman of the Council periodically calls the various committee chairmen together for general discussion of plans and progress. The Research Council meets at least once a month and more frequently when necessary.

Some of the Subjects To Be Investigated

Typical of the subjects to be investigated are: Design, expansion and alteration of physical facilities; improvements of motive power and rolling stock; standardization of practices; selection of materials; operating economics and improved service; co-ordination of facilities and services; railroad consolidation; effect of war-time changes in industry; personnel and employee relations; public relations; competitive transportation agencies such as waterways, pipe lines, highways and airways; merchandise freight service; allied operations such as Railway Express, United States

Mail and forwarding companies; accounting and statistics. New subjects are constantly being added as suggestions may indicate new lines along which research may be profitably conducted.

The committees that have been organized to date, their membership (members of the Research Council are marked "(x)") and the general nature of their assignments are as follows:

1. *Technical Research*—Members of the Committee are:

- S. E. Armstrong, Engr. M. of W., System
- F. S. Austin, Purchasing Agent
- C. B. Bronson, Inspection Engineer
- J. J. Corcoran, Signal Engr.—West of Buffalo
- (x) P. W. Kiefer, Chief Engineer—M. P. & R. S.
- D. B. Thompson, Mech & Elec. Engineer
- H. T. Welty, Engr. of Structures, Buffalo & East
- A. D. Wolff, Jr., *Chairman*, Research Engineer

Studies are being made of the many technical subjects involved in the improvement and development of the railroad plant. These subjects have been broadly divided between those that will help the railroad to meet competition and those that will promote economy in operation. Laboratory and testing work will be done either in the railroad's own testing laboratories or, by co-operative arrangements, in the laboratories of supply and equipment manufacturers or of universities and colleges. There will be close co-ordination between the work of this committee and the research work being done by the various A. A. R. and A. R. E. A. technical committees. Many items that will materially affect the economy of railroad operation are included for investigation.

2. *Diesel Engine vs. Steam Locomotive*—Members of the committee are:

- J. R. O'Malia, Coal Traffic Manager
- A. D. Wolff, Jr., Research Engineer
- (x) P. W. Kiefer, *Chairman*, Chief Engineer, M. P. & R. S.

An overall economic study is being made of Diesel, steam and electric motive power for road service. All three kinds of power are being compared on the basis of overall desirability and performance, including both traffic and operating characteristics.

3. *Highways, Pipe Lines and Waterways*—Members of the committee are:

- T. R. Fitzpatrick, Freight Traffic Manager, P. & L. E.
- (x) T. P. Healy, General Solicitor
- J. P. Patterson, Senior Asst. to Vice-President (Freight Traffic.)
- F. L. Wheeler, General Attorney
- (x) B. S. Voorhees, *Chairman*, Asst. Vice-President, Impts. & Dev.

This committee is making extensive studies in connection with truck and bus operation, pipe lines and waterways, both as to the present situation and what is expected in the post-war period.

4. *Airways*—Members of the committee are:

- C. B. Bennett, Manager Mail and Express
- R. D. Brooks, Attorney
- E. E. Pierce, General Passenger Agent, Buffalo and East
- (x) B. S. Voorhees, Assistant Vice-President, Impts. & Dev.
- E. J. Zschirpe, Assistant to Vice-President (Freight Traffic)
- (x) C. W. Meyer, *Chairman*, Asst. to President

Air transportation of both passengers and cargo is being studied, so as to determine the probable extent of future competition and how to meet it.

5. *Merchandise & Head End Traffic*—Members of the committee are:

- C. B. Bennett, Manager Mail and Express
- C. L. Jellinghaus, Manager Freight Transportation
- (x) C. W. Meyer, Asst. to President
- J. P. Patterson, Senior Asst. to Vice-Pres. (Freight Traffic)
- (x) L. V. Porter, Vice-President and Comptroller
- (x) B. S. Voorhees, Assistant Vice-President, Impts. & Dev.
- (x) T. P. Healy, *Chairman*, General Solicitor

This committee is studying the broad question of

While the New York Central's studies under its recently adopted comprehensive research program have not yet progressed to the point where the company feels justified in reporting publicly upon results accomplished—nevertheless Vice-President Dougherty has acceded to our request that he make known, as he does in this article, the scope of the program and what the organization is for dealing with it.

It is believed that the form of organization the New York Central has adopted will be of especial interest to other railroads interested in this activity—and the nature of some of the problems being studied should also prove suggestive.—The Editor.

traffic handled by express, United States mail, 1. c. 1. freight service and by forwarding companies.

6. *Passenger Service*—Members of the committee are:

- L. C. Anderson, Manager Passenger Transportation
- (x) P. W. Kiefer, Chief Engineer, M. P. & R. S.
- (x) C. W. Meyer, Assistant to President
- A. D. Wolff, Jr., Research Engineer
- F. H. Baird, *Chairman*, General Passenger Traffic Manager

Inasmuch as the New York Central Railroad for years has been one of the largest passenger carriers in the United States, special studies are being progressed to see what can be done to meet post-war competition. This includes improved passenger equipment, higher speeds, far policies, etc.

7. *Freight Service Methods*—Members of the committee are:

- F. B. Hank, Asst. to Vice-Pres. & Gen. Mgr., Buffalo & East
- (x) P. W. Kiefer, Chief Engineer, M. P. & R. S.
- (x) C. W. Meyer, Assistant to President
- P. Rumsey, Supt. Stas. and Transfers
- D. B. Thompson, Mechanical & Electrical Engineer
- A. D. Wolff, Jr., Research Engineer
- E. J. Zschirpe, Asst. to Vice-Pres. (Freight Traffic)
- C. L. Jellinghaus, *Chairman*, Manager Freight Transportation

Careful study is being made of possibilities of generally speeding up the service both for the road and at yards and terminals, as well as the question of operating economics possibly involving shorter and more frequent trains and greater capacities.

8. *Accounting and Statistics*—Members of the committee are:

- J. J. Bodenlos, Asst. to Gen. Pass. Traffic Manager
- J. W. Dwyer, Exec. Asst. to Vice-Pres. Impts. & Dev.
- F. A. Hasbrouck, Spec. Asst. to Executive Vice President
- C. L. Jellinghaus, Manager Freight Transportation

- (x) C. W. Meyer, Assistant to President
- E. J. Zschirpe, Asst. to Vice-President (Freight)
- G. H. Albach, *Chairman*, Asst. Comptroller

This committee's assignment embraces two main objectives: first, to seek economies through simplification of forms and "paper work"; second, to develop ways in which more useful records and controls can be set up for the benefit of the traffic, operating and other departments.

9. *Equipment Machinery, Maintenance & Methods*—Members of the committee are:

- F. S. Austin, Purchasing Agent
- J. A. Brossart, Asst. to Gen. Supt. of R. S.
- R. I. Renfrew, Asst. Gen. Supervisor of Stores
- A. D. Wolff, Jr., Research Engineer
- F. K. Mitchell, *Chairman*, Asst. Gen. Supt., M. P. & R. S.

In order to provide for the modernization of shop tools and equipment, this committee is making a careful study and inventory of present installations. A sub-committee of the System Engineering Committee is also considering this subject with respect to the Maintenance-of-way Department.

10. *Consolidations and Co-ordinations*—Members of the committee are:

- C. J. Brister, Vice-President, Freight Traffic
- (x) T. P. Healy, General Solicitor
- (x) C. W. Meyer, Asst. to President
- (x) W. F. Schaff, Vice-President, West of Buffalo
- (x) A. H. Wright, Vice-President & General Manager, Buffalo & East
- C. M. Yohe, Vice-President, P. & L. E. R. R.
- (x) R. E. Dougherty, *Chairman*, Vice-President, Impts. & Dev.

In view of the ever-present possibility that railroad consolidations and co-ordinations may become an active subject, careful study will be given to such problems as they affect the System.

11. *Personnel*—Members of the committee are:

- (x) C. W. Meyer, Asst. to President
- (x) B. S. Voorhees, Assistant Vice-President, Impts. & Dev.
- L. W. Horning, *Chairman*, Vice-President, Personnel

This committee is investigating ways and means of strengthening the railroad organization by bringing into its service promising young men and the training of men for future executive positions.

12. *Improvement of Service to Industry*—Members of the committee are:

- (x) T. P. Healy, General Solicitor
- (x) B. S. Voorhees, Assistant Vice-President, Impts. & Dev.
- (x) A. H. Wright, Vice-Pres. & Gen. Mgr.
- (x) M. J. Alger, *Chairman*, Vice-President (Traffic)

Investigation and study will be made in an effort to make the railroad service more attractive to its customers.

Close contact is maintained between the Research Council and the A. A. R. Railroad Committee for the Study of Transportation. New York Central Officers who are members of this A. A. R. Committee are: R. E. Dougherty, L. W. Horning, and C. W. Meyer.

While it is realized that research calls for a large amount of study before any concrete results can be obtained, the officers of the Company consider such a program of research necessary in order to produce the highest degree of excellence in New York Central service and to maintain the company's future position in transportation.

Pearl Harbor Changed Railroad Police Work*

By Luther A. Thomas†

INVESTIGATION and police work on railroads in the United States has changed more since Pearl Harbor than in any other era or period of railroad-ing. A few years ago we were greatly concerned with cigarette thieves, coal thieves, hoboes, general routine work, and things that today mean little to us as compared with the war effort.

While the total thefts in 1942 may aggregate a slight increase in amount of claims paid, the ratio, based on volume of business, is the lowest in the history of the railroads. For each and every shipment that is transported in the United States by rail there is signed a bill of lading, which places the responsibility for safe and complete movement and delivery squarely upon the railroads; so this is where the railroad police enter the picture.

At the outbreak of this war, there were approximately 6,500 men engaged in the protection of railroads. Today we have over 13,000 men protecting the roads and internal security, lend lease and war material in transit, and all other commodities transported by rail.

Many "Vulnerable" Commodities

Never in the history of the railroads have so many vulnerable commodities been shipped in open top freight cars. From the time the bill of lading is signed and the car is pulled out of the war plant, it requires almost constant surveillance by railroad police, until the time it reaches destination or point of embarkation. Fortunately, due to the efficiency of the railroads and the splendid cooperation of the War Department, a system has been worked out whereby a carload of war material or freight is not loaded until it is reasonably certain that it can be unloaded upon arrival at destination or the port of embarkation. This not only releases the equipment for another job, but eliminates, to a great degree, the ever-present danger of theft or tampering with it while not in motion.

In addition to protection thus afforded, one of the great problems in the United States today is to protect railroads against sabotage, which requires a large number of guards and police officers protecting not only the war supplies while moving, but the railroad facilities, such as bridges, tunnels, roundhouses, terminals, yards, track, equipment, etc.

I very reluctantly used the word "sabotage," for if there is a word overworked today in the United States it is that word. Today you can scarcely read a page in the newspapers where something will not be said about it. The ever-present problem of children, being permitted to trespass on railroad property generally due to indifferent or preoccupied parents, has caused more damage and destruction, and created more of a problem than any committed by Axis agents. While there have been a good many investigations made for tampering with track or equipment, or derailment of trains, not a proven case has been found to be actual sabotage, or inspired by enemy agents.

(Continued on Page 56)

* An abstract of a recent address before the Annual War Conference, Kentucky Peace Officers' Association, at Bowling Green, Ky.
† Assistant to Vice-President (in charge of investigation and police), Southern Railway System.

A.S.T.M.'s Meeting Considered Wartime Material Problems

**Emphasis placed on overcoming
shortages in critical items at
forty-sixth annual convention at
Pittsburgh—June 28 to July 2**

RECOGNIZING that materials control through proper testing and the development of emergency specifications are vital concomitants of the war effort, the American Society for Testing Materials proceeded with its regular annual meeting this year, holding it at Pittsburgh, Pa., during the five-day period from June 28 to July 2. Testimony to the effect that this recognition of the importance of its work permeated the organization as a whole, is given by the fact that 1,452 members and guests overcame wartime difficulties of travel to attend the meeting. Of all the annual meetings held by the society, of which this was the forty-sixth, only two have shown a higher attendance than was registered this year.

In accordance with customary practice, the meeting took the form of a series of technical sessions at which papers and committee reports on a wide variety of subjects were presented. Specifically, there were 15 such sessions this year at which about 100 papers and reports were presented. Aside from these larger gatherings, several hundred meetings of committees and subcommittees were held during the five-day period. In the election of officers, Dean Harvey, materials engineer, Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa., was elected president, and J. R. Townsend, materials standards engineer, Bell Telephone Laboratories, Inc., New York, was elected vice-president.

To a larger extent, the activities of the meeting were devoted to the consideration of specifications for, and methods of testing, a wide variety of materials, many of them of direct and indirect interest to the railroads. Of special interest at the meeting were a number of symposia on such widely diverse subjects as the identification of water-formed deposits, soil-testing methods, and on the testing of metals for hardness. In arranging the symposium on water-formed deposits, it was recognized that, while a statement of results given by the chemical analysis of water provides a general picture of the oxides present in scales, corrosion products and other deposits, it does not in all cases furnish a true picture of the complex materials formed under operating conditions. Because of this shortcoming of water analysis, certain additional devices are now being used to identify scale deposits, including the polarizing microscope, the spectrograph, and X-ray machines. The ap-



plication of these various methods to the problem of identifying water deposits was considered in three papers dealing with different aspects of the subject.

The symposium on soil testing was arranged for the purpose of bringing interested members up to date regarding present-day methods of evaluating soils as engineering materials, particularly the stabilization treatment of soils with different materials. In this feature of the meeting, five papers were presented on various aspects of the subject, including indication tests, the compaction test, the shear test, bituminous mixtures, and soil-cement mixtures.

The symposium on hardness testing consisted of four papers, one dealing with the value to the engineer of the indentation hardness test, another with the various types of tests, a third with the fundamentals of the hardness test, and the fourth with the limitations of this test. Coincident with the symposium on hardness, the report of the Committee on Methods of Testing was presented, which among other things, reported the completion of a new hardness conversion table for steel. This table presents data on the relationship between diamond pyramid hardness, Rockwell and superficial Rockwell hardness, and Brinell hardness. Conversion tables for other metals and alloys are also being developed.

Of much interest to railroad men in these days when

wood is finding increasing applications for structural purposes, was a paper on Wood as an Engineering Material, by L. J. Markwardt, chief, Division of Timber Mechanics, U. S. Forest Products Laboratory, Madison, Wis.

The aforementioned paper constituted the society's eighteenth Edgar Marburg lecture, a feature which has been presented each year since 1925 in memory of its first secretary. Beginning with a review of the use of wood as an engineering material, and of its structure and characteristics, Mr. Markwardt proceeded to examine the various developments that have contributed to the increasing application and importance of wood in engineering structures and in industry generally. "There seems to be little doubt", he said, "that post-war development will demand an even wider use of wood, as well as bringing new combinations of older established materials and a variety of new products."

Considerable attention was given in the paper to the importance of modern timber connectors in the growth of wood as an engineering material. Since 1933, said Mr. Markwardt, timber connectors have been used in the construction of something like 100,000 structures, involving the use of about 5 billion boardfeet of lumber. He went on to describe the different types of connectors in use, and also related the results of tests that the Forest Products Laboratory has conducted with connectors used with different species of wood. Other subjects discussed by Mr. Markwardt included the development of laminated timber members, new developments in plywood manufacture that have made possible a more durable product, and advancements in preservation materials and methods. The experience with wood during the war, he said, has shown that it is one of the most versatile materials at the command of the engineer.

Executive Body Emphasizes War Activities

In its annual report, the Executive committee considered it of paramount importance to render an accounting of the activities of the society in relation to the war, pointing out that, "until the war is won and the security of our nation assured, the most important measure of our accomplishments is their contribution to the winning of the war". Important among the contributions of the society to the war effort, as related by the Executive committee, is the machinery that has been set up for handling emergency alternate revisions in specifications and for issuing entirely new emergency specifications in order to cope with shortages in critical materials. Through this machinery, the society has issued a total of 106 emergency alternate provisions covering principally the ferrous and non-ferrous metals, but including also a number dealing with cement, asphalt roofing and rubber products. In addition, a total of 31 new emergency specifications have been issued, many of which are playing an important role in war production. The Executive committee was careful to point out, however, that the emphasis on material problems growing out of the emergency "is not to the exclusion of committee work and papers that have a long-range significance and which, because of their intrinsic importance in the promotion of engineering use of materials, should be continued in the interest of maintaining this work on a sound basis for the post-war period."

In its report, the Committee on Standards reviewed the action that had been taken by the society during the past year with reference to various standards; and

in addition it listed the specifications that had been affected by emergency alternate provisions accepted by the committee during the year. Among these latter specifications were a number covering materials of direct and indirect interest to the railroads. The report also contained a list of 25 emergency standards that had been accepted by the committee during the year. Under the emergency procedure that has been established by the society, all recommendations covering the setting up of emergency alternate provisions in existing standards, must be approved by the Committee on Standards.

Iron and Steel

One of the 15 technical sessions of the convention was devoted to committee reports and papers dealing with iron and steel. For the first time in many years, the Committee on Steel did not recommend in its report a large number of actions for society approval. In fact, only one recommendation was made, namely, the adoption as standard of the tentative specifications for ring and disc forgings. The principal feature of this committee's report was a description and listing of the emergency alternate provisions that had been developed by the committee between June 22, 1942 and May 15, 1943. Among these emergency provisions are a number affecting specifications covering railroad materials. Reference was also made in the report to a number of pending emergency alternate provisions that were nearing completion at the time that the report was prepared.

In a brief progress report presented during the session on iron and steel, the Committee on Malleable Iron Castings reported completion of emergency specifications for malleable iron flanges, pipe fittings and valve parts. Also, the Committee on Iron-Chromium, Iron-Chromium-Nickel and Related Alloys, whose activities are concerned with those ferro-alloys that are known for their resistance to corrosion and high temperatures, recommended for publication as tentative a set of specifications for corrosion-resisting, chromium-steel clad and chromium-nickel-steel clad sheet, strip and plate for pressure-vessel construction.

Corrosion—Non-Ferrous Metals

Among the reports of interest to railroads that were presented during a session on corrosion was that of the Committee on Corrosion of Iron and Steel. Aside from a review of the work of the committee, this report contained a tabulated inspection record of copper-bearing and noncopper-bearing corrugated black sheets that have been under exposure at Annapolis, Md., since October, 1916. A detailed report was also included, giving the results of an atmospheric corrosion test on wire and wire products after exposure for about six years at eleven test locations.

Among other items presented during a session on non-ferrous metals was a paper dealing with the conservation of tin used in soft solders. Emphasizing the necessity of reducing the amount of tin used in soft solders as a measure of tin conservation, this paper discussed the use and properties of various low-tin solders, including low-tin lead, tin-antimony lead, silver lead, silver-antimony lead, tin-bismuth lead and tin-cadmium lead compositions. Recommendations were made concerning changes in soldering practices required for success in the use of alternate solder compositions. Presented during this same session, the report of the Committee on Copper and Copper Alloys,

Cast and Wrought, recommended revisions in the standard specifications for rolled copper-alloy bearing and expansion plates for bridge and other structural uses, in the specifications for phosphor bronze sheet and strip, and in those for copper and copper-alloy seamless condenser tubes, which were presented for immediate adoption. It was also recommended that the tentative specifications for bright annealed seamless copper tubing be revised and adopted as standard, and that the tentative specifications for copper pipe, manganese bronze rods and leaded red brass rods be adopted as standard without change.

Cement and Concrete

A number of reports and papers of interest to users of cement, concrete and related materials was presented at a number of sessions devoted to such subjects. Among these was the report of the Committee on Cement, in which was presented a complete revision of the tentative methods of test for compressive strength of Portland cement mortars, and in which the test for autoclave expansion of Portland cement, with revisions, was recommended for adoption as standard. Among other things, this report contained a comprehensive discussion of the effect of alkalis in Portland cement on the durability of concrete. It was also noted that, while the emergency alternate specifications for Portland cement issued in 1942 have continued in force unchanged, it has been reported that certain cement that had been ground close to the lower fineness limit permitted in the emergency alternate had exhibited excessive "bleeding" when used in concrete. The special advisory sub-committee that was appointed last year to consider matters relating to W. P. B. limitations on cement has been instructed to investigate this bleeding, and its relation to fineness, and to make such recommendations as may seem appropriate.

Committee Considering a Number of Revisions

While the report of the Committee on Concrete and Concrete Aggregates contained no specific recommendations, it pointed out that the committee is considering revisions of a number of methods, including the tests for structural strength of fine aggregate using constant water-cement-ratio mortar, for soundness of aggregates by use of sodium sulphate or magnesium sulphate, for sieve analysis of fine and coarse aggregates, for efficiency of materials for curing concrete, and for determining the volume change of cement, mortar and concrete. In addition, the committee has under development a revised method of test for surface moisture

of fine aggregate, and methods for determining water gain, for making concrete test specimens for vibrated concrete, for testing the uniformity of concrete proportions, for making freezing-and-thawing tests of concrete, and for determining the rate of loading of concrete test specimens.

Among a number of interesting papers on concrete was one describing a simplified test for evaluating the mixing effectiveness of concrete mixers and another describing the effect of membrane curing on the durability and strength of concrete. Still another paper described a series of tests that were made to determine the performance of 16 solid concrete slabs when exposed on one face to standard fire temperatures. These slabs were tested vertically, and simulated solid wall specimens 4 in., 6 in., and 8 in. thick. During exposure to fire, the slabs carried loads of 400 or 500 lb. per sq. in. After cooling to room temperature, each slab was subjected to a second fire test and the load-carrying ability after two exposures to fire was determined.

Mention is made in the foregoing of only a few of the subjects considered at the meeting. Other committee reports and papers of more or less interest to the railroads covered such subjects as boiler feedwater studies, petroleum products and lubricants, thermal insulating materials, coal and coke electrical insulating materials, fatigue of metals, the measurement of bond between bricks and mortar, and a method for determining the heat of hydration of Portland cement.

Demountable Buildings

THE Texas Pre-Fabricated House & Tent Company, Dallas, Tex., is now offering to the railroads its "Victory" housing unit. This is a prefabricated, demountable and portable building which is designed to constitute an answer to the wartime and post-war need of the railroads for a type of structure that can be dismantled and moved elsewhere if occasion should arise, but which has all the aspects of permanent construction. At the present time the most pressing need for a building of this type is recognized to be in connection with the provision of housing accommodations for employees, such as at the labor camps of the maintenance of way departments. The "Victory" unit is designed for mass production, and was originally developed for housing the armed forces at army camps and elsewhere, for which purpose it is said to have proved highly successful and popular.

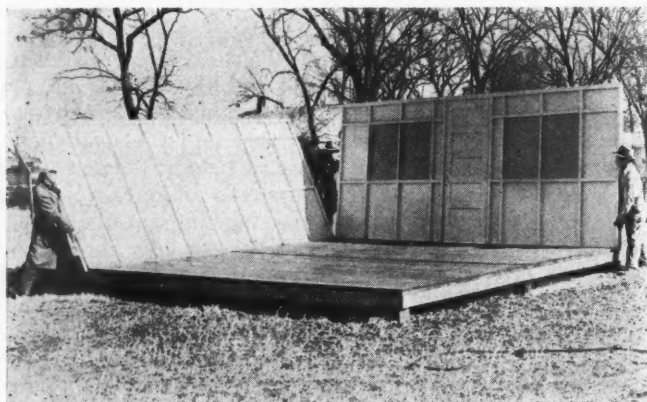
The basic unit of this form of construction is a

This View Shows How the "Victory" Units Can Be Joined Together to Form Larger Structures



structure 16 ft. sq. in plan. However, by omitting wall sections and through the use of connecting floor and ceiling panels, any number of the basic units can be joined to form a structure of almost any size and shape desired, and when this is done partition-panels are available by means of which the interior can be divided in any desired manner. The components of the basic unit include two floor sections, four wall sections, four roof sections, a metal ventilator, a roof collar and four metal ridges to cover the joints where the roof sections meet, together with foundation blocks and all the necessary bolts, screws and hardware.

Briefly, each floor panel is constructed of 1-in. by



Assembling a "Victory" Unit

4-in. or 1-in. by 6-in. yellow-pine flooring nailed to floor joists, and including the necessary bracing and sills. Each wall section embodies a web-work of 2-in. by 2-in. wood studs with an outside covering of exterior plywood, $\frac{3}{8}$ -in. thick. Each wall contains a number of large screened windows, all covered by hinged plywood flaps. Instead of wire screens, several of the windows are covered with Cel-o-glass screening, a translucent material permitting the passage of light but restricting the passage of air. An optional feature is the provision of casement-type sash, glazed with glass, in place of the Cel-o-glass.

A special feature of the construction is the design of the roof. This part of the structure, which is of the hip-type, embodies a web-work of timber members, to both sides of which are nailed exterior plywood panels, thereby making a double roof. The roof overhangs the walls and is so constructed as to provide openings under the eaves approximately 2 in. by 22 in. in size, which permit the entrance of air into the space between the outside and inside layers of plywood. Another feature is a metal mosquito-proof ventilator which is placed in the apex of the roof where the four sections meet. Thus, the air entering the openings is free to pass upward between the two layers of plywood and out through the ventilator. In winter, the ventilator accommodates a stove-pipe; and the air space in the double roof becomes an insulating element.

It can be seen, therefore, that the roof is designed to stabilize the temperature of the air within the room, and has both ventilating and insulating qualities, so that it helps to keep the interior cool in warm weather and warm in cold weather. It is said that the "Victory" units are being used with entirely satisfactory results in sections of the United States where the winter temperature is quite severe. For use in far northern climates, it is said that a unit with an interior wall panel added, together with the addition of insulation in the

walls, the roof, and the floor, with a storm-door entryway, has been tested and found satisfactory at temperatures many degrees below zero.

Advantages claimed for the "Victory" unit are that it is a highly economical form of construction with reference both to initial cost and upkeep; that it can be demounted and moved or stored and erected again for other uses elsewhere; that it is a soundly built, substantial housing unit with an estimated potential life of at least 15 years under normal conditions; and that its erection is a simple operation requiring only a few man-hours to perform. In fact, contractors working on military sites have erected groups of the units in an average of 11 minutes each. It is said that 10 of the basic units, having sufficient capacity when erected for housing 50 to 60 men comfortably, can be transported on a 50-ft. freight car.

Pearl Harbor Changed Railroad Police Work

(Continued from Page 52)

Only recently, J. Edgar Hoover, Director of the Federal Bureau of Investigation, warned, that, "The derailling of trains and the destruction of war material is just as real and just as harmful to America's war effort whether motivated by a youth's desire for excitement or by an Axis agent's desire to sabotage our war program." He says, commenting on the increase in such cases, they "exemplified the tremendous increase in juvenile delinquency since America's entry into the war." "All of this means," he added, "that a greater effort than ever must be made by parents, families, schools, churches, youth organizations and law enforcement agencies to provide wholesome and constructive outlets for the energies and talents of American youth."

Heavy Travel Brings Police Problems

Those who have made any recent trips on our passenger trains are no doubt amazed at the tremendous number of men, women, and children, not to mention the furloughed soldiers, using our railroads today. The Office of Defense Transportation has very wisely counseled people to refrain from traveling except in essential cases. Unfortunately, passenger travel continues to increase.

While the railroads are concerned with personnel and equipment to haul these folks in, the railroad police departments are likewise being unnecessarily taxed by having to locate many thousands of lost or carelessly misplaced traveling bags, wearing apparel and items too numerous to mention, by the traveling public. We frequently find it necessary to take police officers from other essential work to police crowded trains.

On a great many of our through, heavily-traveled trains the War Department has assigned military police. Our experience in working with them shows that they are outstanding soldiers and police officers, carefully selected and trained for their job.

In outlining the job confronting the railroad police officer today, I want to stress that the protection of American railroads is not done from Washington, but in this town, your community, your county, and your state. And the fine spirit of cooperation and coordination between railroad police; city, county, and state officers; together with an abundance of help from the Federal Bureau of Investigation and other government security agencies, shows that where there is a will to do, the job can be accomplished.

President Gets Non-op Wage Case

Next move appears to be up to White House after Sharfman refusal to reconvene emergency board for further proceedings suggested by Economic Stabilization Director Vinson

WASHINGTON, D. C.

DEVELOPMENTS of the past week have created a situation wherein President Roosevelt has the next move in what has become the complicated game of settling the controversy which has arisen over Economic Stabilization Director Fred M. Vinson's action staying the recommended eight cents per hour wage increase for non-operating railroad employees. Director Vinson's memorandum opinion of July 1 undertook to remand the case to the National Railway Labor Panel emergency board which heard it originally; but Dr. I. L. Sharfman, who was chairman of that board, takes the position that the board has "ceased to exist" and he is without authority to reconvene it.

Also, Dr. William M. Leiserson, chairman of the Panel, was reported to feel that he has no authority to recall the Sharfman board in the absence of further Presidential action. There is precedent for President Roosevelt's recalling of an emergency board. When the labor organizations rejected the recommendations of the board which heard the general wage case of 1941, the President intervened to recall the board for further proceedings which brought forth the so-called mediation settlement of December, 1941.

"Gross Inequities" Basis Rejected by Vinson

As noted briefly on "The Week at a Glance" page of last week's issue, Director Vinson's memorandum opinion (the follow-through from his stay order of June 22) revealed that the recommended eight-cent increase had been disapproved because it was based on alleged "gross inequities" shown by comparisons of railway wages with those in other industries. The emergency board report was reviewed in the *Railway Age* of May 29, page 1095. As noted there, the board relied on that stabilization program loophole permitting adjustment to "aid in the effective prosecution of the war or to correct gross inequities," which was restored to wartime wage procedures by former Economic Stabilization Director James F. Byrnes' directive of May 12 after having been removed by President Roosevelt's "hold-the-line" order of April 8.

Director Vinson took the position in effect that the board's use of the "gross inequities" device was not justified under the Presidential order as modified by the Byrnes directive. He went on to authorize the board to reconsider the case with a view to applying other tests, particularly the justification for an adjustment to "correct substandards of living." To this, Dr. Sharfman, in a July 3 letter to Mr. Vinson, replied that the procedures suggested "are, in my judgment, entirely unworkable in the circumstances of this proceeding, except insofar as they may be effectuated through arbitrary action."

The "substandard of living" device seemed to be about the only one which Director Vinson thought might possibly justify an increase for the non-ops. He ruled that the emergency board had properly applied the "Little

Steel" formula when it found that the group as a whole had already received the 15 per cent increase authorized thereunder and refused to deal separately with some 40 subsidiary classes which had not. Also, the opinion carries a footnote asserting that "there is no overtime issue in this case." In the latter connection President Roosevelt has recently indicated that he favors an adjustment which would give the non-ops time and one-half for the last eight hours of their 48-hour week.

Proceeding to discuss what might be done via the "substandard of living" route, Mr. Vinson finally arrives at the suggestion that the board might determine that all non-ops receiving less than a designated rate per hour are entitled to receive an increase. And such an adjustment could contemplate other revisions to preserve differentials, although the latter "should be tapered off so as to obviate the need so far as practically feasible for revisions in the higher wage brackets."

"On this record," Mr. Vinson said, "it appears that the substandard test might well be considered. It is recognized that the substandard test is often difficult to apply. If this test is applied not only must it be decided which rates are to be changed because they promote substandard living conditions, but also it must be decided what adjustments are necessary in the immediately inter-related job classifications to keep the minimum differentials required for productive efficiency. The substandard test must not become futile, however, simply because it is difficult to apply."

"It is true that the substandard test generally requires a consideration of local circumstances which bear upon accustomed wage levels. . . . The adjustment of such wages in a general upward direction, tending toward achievement of a national minimum standard of living, is a difficult and complicated process. . . . In ordinary cases, therefore, it is necessary to consider the improvement of substandard living conditions in the light of economic conditions prevailing in a particular region or area. For this reason, it is generally deemed impractical to set a national figure and arbitrarily to determine that any wage below that figure is substandard, even though such a determination might be factually correct."

Nationwide Standards Justified

"However, such localized treatment might not always be necessary. A particular industry, a particular segment of an industry, or even a particular employer may call for nationwide treatment. . . . When it has long been the practice, as in the case of the railroad industry, to adjust wage scales by nationwide agreements, treatment on a national rather than a regional basis would be especially justified."

Then came the suggestion that the board might recommend adjustment of all wages under a designated rate per hour with some further revisions to preserve differentials. Where the opinion calls for a tapering off of the latter, it goes on to say that such tapering "must be done

in rigorous fashion so as to reflect actually the minimum increase necessary for productive efficiency in the inter-related job classifications and not to reflect a general wage increase under that name."

Dr. Sharfman's refusal to reconvene the emergency board was embodied in his July 3 letter to Mr. Vinson, which was given out at a Sharfman press conference held in Washington late that day. In making his points that the board had "ceased to exist" and that he had no power to reconvene it, Dr. Sharfman also said that it had not been reconstituted by Dr. Leiserson; nor had the President asked the members for further service. Furthermore, he pointed out, that he is now serving on another emergency board—the one sitting in New York on the case involving wage demands of the transportation brotherhoods.

Reconvening Would Serve "No Useful Purpose"

Continuing, Dr. Sharfman "respectfully" submitted that even if the emergency board were recalled in its original capacity "no useful purpose would be served by a reconsideration of its recommendations on the basis of your memorandum opinion." He went on to say that this Vinson memorandum "does not confine itself, or even deal primarily with, the effects of our findings and recommendations upon the stabilization program; it seeks, rather, to mold the terms of settlement of the dispute between the carriers and their employees—which is a function, I venture to believe, entrusted exclusively to the emergency board."

With respect to the substandard-of-living test, Dr. Sharfman took the position that it had already received the board's "very careful consideration"; and "the disposition made of it in our report to the President reflects our deliberate and informed conclusion as to the demands of the situation, in the interest of safeguarding the stabilization program as well as of settling the dispute involved." Then came the letter's appraisal of the Vinson proposal as an "entirely unworkable" one, from which Dr. Sharfman continued as follows:

"There is no sound basis, grounded in available facts, for declaring in this nationwide industry that all wage rates below a uniform designated level involve substandards of living; nor is there any basis for recommending tapering adjustments in so-called related job classifications. Determinations of this character would be lacking in factual support, and they would tend to be construed as establishing absolute national standards and thereby promote inflationary adjustments for the economy as a whole.

"These procedures would completely disregard, furthermore, the nature of the dispute submitted to the emergency board for investigation and report. Neither the employees nor the carriers sought to reconstitute the long-established wage relationships involved, and the record in the proceeding provides no foundation for altering the existing differentials, in cents per hour, between the various classes of non-operating employees.

"The emergency board recommended to the President what it deemed to be a fair and reasonable settlement of the dispute, after giving full weight to the requirements of the stabilization program and its authority under that program. On the record before the board there is no justification for modifying its recommendations. The complete alteration of the basis of settlement suggested in your memorandum opinion would not only result in the perpetuation of gross inequities, as well as in the creation of new ones, but it would remove the adjustment of railway labor disputes from agencies established by

the Railway Labor Act and would thereby jeopardize the procedures and machinery of that act. There is real danger that such an outcome would gravely impair the effective prosecution of the war."

In closing, Dr. Sharfman again made plain his view that the emergency board "no longer exists as a functioning tribunal," and thus his comment was submitted solely on his own behalf. He went on to tell Mr. Vinson that other members of the board (Walter T. Fisher and John A. Fitch) or Panel Chairman Leiserson "may of course communicate to you such views as they may deem to be necessary and proper." It is understood that Mr. Fisher has done so, filing a statement supporting the Sharfman position.

While, as noted at the outset, the Vinson-Sharfman impasse put the issue before President Roosevelt, there had already been White House conferences on the matter. George M. Harrison, president of the Brotherhood of Railway Clerks, B. M. Jewell, president of the Railway Employees Department, American Federation of Labor, and E. E. Milliman, president of the Brotherhood of Maintenance of Way Employees, are understood to have met with Mr. Vinson prior to the promulgation of the memorandum opinion. That meeting, unsuccessful from labor's standpoint, was followed by a White House meeting on the evening of July 3. It was attended by William Green, president of the A. F. of L., as well as by representatives of the interested railway labor organizations.

Some Talk of Strike Vote

There has been some talk of a strike vote among the labor organizations, but no official pronouncement along those lines. Railway labor leaders were among those who joined in the "no-strike" pledge made to President Roosevelt shortly after Pearl Harbor. Echoes of the controversy were heard in Congress last week when Representative Fish, Republican of New York, inserted in the appendix to the July 2 Congressional Record a letter protesting against the Vinson order which he had received from James McAndrew, president, Port Jervis (N. Y.) Local, Shop Crafts Federation. Mr. Fish suggested a Congressional investigation of the stay order; because "it must be apparent to everyone that such an increase is warranted and justifiable in view of the mounting cost of living and the higher wage scales paid in war industries, and particularly because all railroads are now earning far more money, and have been since the war started, than ever before in their history."

One view of the controversy has been that Director Vinson's authority under Presidential orders defining wartime railway wage procedures does not contemplate that he should remand cases to emergency boards, but that he, himself, should change any recommendations which he finds to conflict with the stabilization program. The pertinent executive order is No. 9299 issued by President Roosevelt on February 4, as noted in the *Railway Age* of February 13, page 372. It provides that "Unless and except to the extent that the Economic Stabilization Director shall otherwise direct, the recommendations of the Emergency Board in regard to proposed changes affecting wages and salary payments shall, upon the expiration of 30 days after the report is filed with the President, become effective."

Meanwhile the Sharfman board has issued its supplemental report in the proceeding. A 167-page document, dated May 29, it is the "full analysis of the testimony, exhibits, and argument utilized" which was promised when the original report was issued on May 24.



High-Speed Freights, Containing Many Transcontinental Loads, Characterize the Central Kansas-Colorado Division of Mo.P.

Fast Freights Speed War Traffic

Kansas City-Colorado line of the Missouri Pacific serves as efficient bridge railway for transcontinental shipments

FREIGHT trains on the Central Kansas-Colorado division of the Missouri Pacific travel fast. The line between Kansas City and Pueblo was consolidated under the supervision of one superintendent some years ago and was built up into a high-speed railway that serves as an important link in a transcontinental route. The industrialization of the West Coast under the impetus of wartime conditions has made this division even more important, as one of the lines contributing much to the war effort. It is a single-track line, handling a big business and handling it fast.

Beginning some 15 years ago, this line was practically re-constructed throughout, largely to put it in shape for handling West Coast perishables on fast schedules in connection with the Denver & Rio Grande Western. Of course, these improvements were also designed to improve operations generally, as this division normally handles many commodities other than perishables. For example, it serves a large wheat producing area. Even with storage restrictions in effect, more than 5,000 cars of wheat have been loaded and shipped on this division since the last harvest from stations between Horace, Kan., and Hoisington, a distance of 172 miles, and there are approximately 3,000 cars of this commodity yet to move.

Numerous grade curve and reduction projects were carried out for a decade or more and the railway was still further "speeded up" only recently. This was to prepare for the operation of the Colorado Eagle, a high-speed, streamlined train that frequently reaches 100 m.p.h. during its run. This preparation included, among other things, the lengthening of spirals on curves. The

present situation is well indicated by the fact that, for 338 miles on the west end of the division, there is no curve with a speed restriction lower than 60 m.p.h.

The value of these improvements is being demonstrated daily, as traffic continues to increase on this division. Not only has overhead traffic increased largely, but, through the location of air training fields, ammunition depots, large cantonments and aircraft plants adjacent to the railway, local business has shown even greater increases. For example, the earnings of one local station increased from \$29,371 in November, 1941, to \$112,059 in November, 1942, while the earnings of another station jumped from \$251 in November, 1941, to \$210,734 in the same month of 1942. A larger station showed an increase of several hundred per cent in earnings and the two switch engines normally worked there had to be increased to 11. At still another local station revenues jumped from \$10,917 in November, 1941, to \$431,128 in November, 1942.

This increased activity has exerted an effect on other stations where no military encampments or war industries are situated, as at Scott City, Kan., where no war industries are located and which is almost entirely a cattle and wheat shipping center, but which increased in earnings from \$6,733 in November, 1941, to \$25,070 in November, 1942.

The freight traffic increases are reflected in the statistics of gross ton miles in Table No. 1, which show an increase of more than 70 per cent in a two-year period. Expressed differently, and to show what such an increase means at certain times, statistics for the peak month of October are given in Table No. 2. These in-

dicade that last October showed an increase of 43 per cent in freight traffic over the peak month of 1929.

By reason of the troop movements (68 troop trains were moved over this division in one three-day period last fall) and the general increase in civilian travel passenger traffic has shown even greater increases than freight traffic. Since figures on total passengers handled are not kept on a divisional basis, passenger car miles are given as a yardstick in Table No. 3. Although it should be recognized that this does not fully reflect the increases in passengers handled as the occupancy per car is far greater today than ever before.

Table No. 1. Gross Ton Miles (In Thousands)

Division	1942	Inc. Over 1941 %	Inc. Over 1940 %	1941	1940
Colorado	2,799,174	38.3	79.4	2,024,620	1,239,528
Central Kansas	3,306,447	37.3	64.8	2,409,012	1,300,365
Total	6,105,621	37.7	71.2	4,433,632	3,565,728

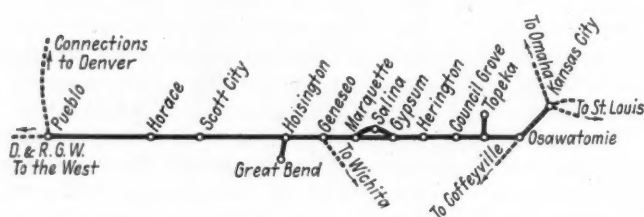
Table No. 2. Gross Ton Miles (In Thousands) Comparative October Peaks

Division	Oct. 1942	Oct. 1929	% Inc.
Colorado	328,008	242,442	35
Central Kansas	378,103	256,101	48
Total	706,111	498,543	43

Table No. 3. Passenger Car Miles

Division	1942	1941	1940
Colorado	5,575,506	4,013,589	3,827,286
Central Kansas	5,156,790	3,722,404	3,494,938
Total	10,732,296	7,735,993	7,322,224

One of the features of the increased traffic, that has occurred on all lines handling a large percentage of transcontinental business, has been the reversal of the direction of loaded traffic. In tonnage, eastbound traffic normally predominates on the basis of 55 per cent as against 45 per cent. Today, these figures are almost exactly reversed and the increase in westbound business has necessitated a change in operations and in the dis-



The Central Kansas-Colorado Division of the Missouri Pacific

tribution of power. It means further, that instead of hauling most of the loaded traffic downhill from the Colorado plateau to the Missouri River valley, the M. P. is now compelled to lift it from Kansas City, 745 ft. above sea level, to Pueblo, at 4,660 ft., a rise of 3,915 ft. in 628 miles.

The Central Kansas-Colorado division comprises the main line from Kansas City to Pueblo, plus a relatively small percentage of other lines. The alternate line via Salina, Kan., is 42 miles long, the Topeka branch, 40 miles, and the Great Bend branch 10 miles, bringing the total mileage for the division to 720. The line from Hoisington, Kan., to Pueblo, 338 miles was formerly a separate division and separate statistics are still maintained for this so-called Colorado division. Although the entire line is now under the jurisdiction of one superintendent, with headquarters at Osawatimie, Kan., and an assistant superintendent, with headquarters at Pueblo.



Excellent Track Permits of High-Speed Operations

The sub-divisions extend between Kansas City-Osawatimie-Council Grove-Hoisington-Horace-Pueblo. Two additional trainmasters and one assistant trainmaster have been added to the supervisory staff to assist in taking care of the increased business. Some of these are stationed at localities where war industries have required changed operations and closer supervision. The increased traffic has also necessitated an increase in the dispatching force and two new sets of dispatchers have been added. The former and the present dispatching arrangements are given below:

Former Dispatching Districts

	Main Line Miles
Kansas City—Hoisington	279
Hoisington—Pueblo	338

Present Dispatching Districts

	Main Line Miles
Kansas City—Council Grove	146
Council Grove—Hoisington	133
Hoisington—Horace	172
Horace—Pueblo	166

The organization is on an overall basis, that is to say, all departments of the division report directly to the division superintendent.

Two Types of Operation

Two distinct types of operation are in effect on the division, to take care of two quite different sets of conditions. Between Kansas City and Osawatimie, 54 miles, the division handles north and south as well as east and west traffic. Also, far more coal and other heavy tonnage freight is handled on this section. Grades of 1.5 per cent are encountered as the railway leaves the valley at Kansas City, and it climbs from an elevation of 750 ft. at the foot of Wagstaff hill to a summit of 1,120 ft. within a distance of 40 miles; then drops down into Osawatimie at 900 ft.

To meet these conditions, heavy, powerful and rather slow locomotives equipped with boosters are used and the tonnage per train is still further increased by the use of helper locomotives. To avoid as many stops as possible for these heavy trains, this section of the line is equipped with centralized traffic control, which has proved its value on this heavy-traffic, single-track line

where 50 trains a day are frequently handled in peak periods.

In the territory between Osawatomie and Pueblo, the method of operation is quite different, to meet the conditions prevailing there. On this section, high-speed freight locomotives with 74-in. driving wheels are used. These locomotives can also be used on passenger trains when necessary. The trains handled average about 60 cars and speed in getting them over the 563-mile run is the essential consideration. Apart from the local traffic, which is growing rapidly because of military establishments, the business is handled in through trains which do little or no setting off and picking up en route. These trains are made up at Osawatomie and classified there, not only for Pueblo, but for delivery to the Southern Pacific and the Western Pacific at Salt Lake City, beyond the D. & R. G. W.

The Pueblo joint yard is operated by the D. & R. G. W. and the growth of traffic through this gateway is indicated by the following:

Pueblo Interchange	1942	1941	1940
Loads delivered	56,456	33,046	23,297
Loads received	53,841	49,275	40,441

This also indicates the change in the direction of loaded traffic. It will be observed that, in previous years the eastbound traffic predominated by a large margin, whereas, in 1942, westbound loads exceeded eastbound loads.

Locomotive Utilization

In the interests of speed and of greater locomotive utilization, freight engines and cabooses are run through over the 563 miles between Osawatomie and Pueblo, as compared with the former practice of using four different engines in the course of the run, with changes at Council Grove, Hoisington and Horace. Now, after the ash pan is cleaned at each of these places, the original locomotive continues through. As a result, some of the locomotives used in through service average as high as 12,000 miles monthly.

This division has only one Diesel-electric freight locomotive, but this engine is used to the fullest extent. It takes a train from Osawatomie to Topeka, 95 miles, in the early morning, handles switching in Topeka all day and returns to Osawatomie with a train at night, arriving in time to haul the morning train to Topeka again.

The principal mechanical facilities for the steam locomotives are at Hoisington, where a large back shop

is maintained that does work for other divisions as well. A small back shop and a large, modern, heated engine-house are also located at Osawatomie.

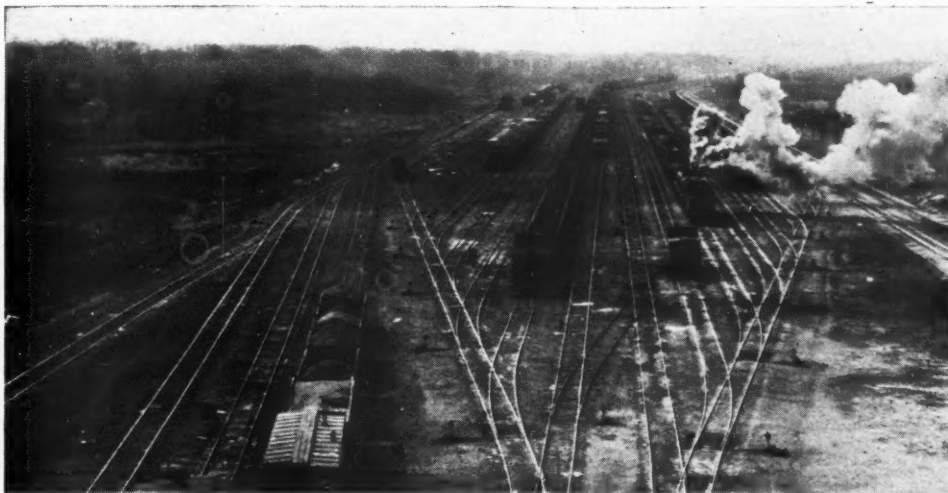
Building Track for High Speed

The popular conception of Kansas as a flat prairie state where railroads can run straight for miles is not borne out on the Central Kansas division. As stated previously, there are helper grades in both directions between Kansas City and Osawatomie. Shortly after leaving the latter point, the railway parallels a river and is hemmed in on the other side by hills, requiring much curvature. Leaving the valley, the line then traverses the northern end of the rugged Flint Hills, with still more curvature, grades and deep cuts. Actually, the longest tangent between Kansas City and Hoisington, 279 miles, is only 11 miles. West of Hoisington, however, the topography changes and, while the grade line is still somewhat broken, the climb westbound is fairly steady and the curvature is negligible.

On a railway such as this, under the construction methods of several decades ago, there were numerous dips and sags. A steady, year-by-year improvement program has eliminated these and provided for smoother, more efficient running. In addition, many grade and curve reductions have been undertaken, one of the largest of which was a major line change between Council Grove, Kan., and Allen, 18 miles in length. The largest project of this nature completed in 1942 was the relocation of 1.25 miles of track near Gypsum, Kan., which removed it from danger of overflow and also eliminated much curvature.

The main line between Kansas City and Hoisington, 279 miles, is laid with 112-lb. rail with the exception of one stretch of 56 miles of 90-lb. rail, which is programmed for relaying with 112-lb. rail in 1943. The main line between Hoisington and Pueblo, 338 miles, is all 90-lb. rail. Much of the track is ballasted with slag, weighing 3,300 lb. per yard, taken from Colorado silver-mine dumps. Other ballast includes Joplin chatts.

In the interests of still speedier operation, a continuous program of installing power switches is being carried out. Flange oilers are also installed on curves wherever necessary. In brief, the Central Kansas-Colorado division of the Missouri Pacific has been built as a high-speed railway for transcontinental traffic, in which capacity it is invaluable to the nation's war effort in the present emergency.



The Yards at Osawatomie, Kan., Are An Important Classification Center

Op Wage Hearing Nearing Close

Direct testimony on behalf of Class I roads concluded, leaving presentations of short lines and Pullman Company, and oral arguments still to come

DIRECT presentation of testimony on behalf of railroads represented by the Carriers' Conference Committee was concluded at this week's sessions of the New York hearings on demands of the train service brotherhoods for a 30 per cent wage increase with a minimum raise of \$3 per "day". Then came the rebuttal of the labor organizations which was to be followed by presentations on behalf of short-line railroads and the Pullman Company and oral arguments of counsel.

The proceeding is before a National Railway Labor Panel emergency board consisting of Chairman Walter P. Stacy, I. L. Sharfman and Frank M. Swacker. Chief counsel for the Carriers' Conference Committee is J. Aronson, vice-president (law) New York Central; while the brotherhood legal staff is headed by Edward J. Flynn, former chairman of the Democratic National Committee.

Revelle W. Brown, president of the Lehigh Valley, became sixth witness for the carriers on the 19th day of the hearing. Remarking on his own railroad experience and calling attention to the changes in present-day railroading, he undertook to establish the fact that "there has been no change in the operating conditions of the American railroads that has created an increased responsibility or service required of the employees in train and engine service," but rather there has been "a gradual and continued decrease in such responsibilities and duties, accompanied by a marked decrease in the hazardous conditions that formerly accompanied railroad employment."

Stating that wage increases "have been granted to men in this class of service in line with the wage increases granted other employees", Mr. Brown said it seemed to him "that in determining a solution of the problem now confronting the Board, i.e., request for a wage increase, that the duties now performed by the members of the organizations involved should have no bearing whatever on any decision that could be rendered unless it is clearly established that such changes in the requirements of the men have resulted since the last wage increase of 1941 was granted." And he added, "I can assure you there have been none."

Mr. Brown considered the factors in this case twofold: "(1) The effect of any increase on the efforts that are being made to stabilize prices and wages to prevent the continuation of the inflationary trend, and (2) the effect of such increases on the public, employees and the employer." He noted that while returns for 1942 and the first four months of '43 show large net earnings, "there is no more basis for assuming that the net earnings of the railroads as shown are sound or can be used as a basis for determining their earning power than it would be to take the earnings from a farm where every acre was put under intensive cultivation for several years with the kind of crops planted that gave the greatest return. During the period the farm was so used, it would be drained of the fertility

of the soil to the greatest extent. No money would be taken from the income to provide fertilizer; no portion of the farm would be given the rest that the land requires. Everything that could be gotten out of the farm would be taken out during the years and nothing would be put back. The use of that farm would be along the lines of the railroads during this emergency period. The time would come when the farm would not produce. It would be worn out—and the same is true of the railroads."

Employees Have "Vital Stake" in Future of Roads

Mr. Brown said the only reason net earnings were so great in 1942 and 1943 was because railroads could not spend money for labor and material. Asserting employees have a "vital stake" in the future of railroads, and pointing out that should the industry fail, they would be as seriously affected as investors, he cautioned there was need to prepare financially for the post-war period. He did not wish to infer that employees should work for low wages "in order to enable railroads to carry out their war requirements, to take care of the financial results of the previous ten years of depression and to prepare themselves for the after-the-war readjustment." He has always believed in "reasonable" wages. It is his view, however, that all engaged in railroading should do their "reasonable part in maintaining the railroad machine," and he stated he did not think any wages "reasonable" when raised "to such an extent that they will destroy the property of those whose money is invested in the railroad machine which we operate."

Thomas O. Taylor, secretary of the Bureau of Information of the Eastern Railways, discussed the earnings made by crews of through passenger trains, and presented figures of hours on duty, and wages paid on the mileage basis to engineers, firemen, conductors and brakemen on a number of well-known through passenger trains. If present wage demands are granted, "already high earnings" will be pyramided, he said.

Mr. Taylor pointed out that on the "Capitol Limited" of the Baltimore & Ohio, which operates between Washington and Chicago, engineers who now average \$3.43 per hour on duty will receive \$4.64, if wage demands are granted. A fireman now is paid on the average \$2.79, and with the increase would receive \$4.01, while conductors now earning \$2.52 would make \$3.41, and brakemen with \$1.89 now would get \$2.78. On the New York Central's "Twentieth Century," running between New York and Chicago, engineers now average \$3.89 per hour on duty. With the demanded increase, earnings would average \$5.30; firemen with \$3.12 would earn \$4.53; conductors at \$2.78 would receive \$3.77 and brakemen averaging \$2.21 now would receive \$3.27. Engineers on the Atchison, Topeka & Santa Fe "Chief," operating between Chicago and Los Angeles, now earn on an average \$3.68 per hour on duty. Should the increase be granted, they will then receive \$4.99. In the

case of firemen, who now average \$2.97, wages would reach \$4.28, conductors with \$2.43 would get \$3.29 and brakemen with \$1.80 would earn \$2.66.

Mr. Taylor cited the case of an engineer, who in the month of March, 1943, made 31 trips or 15½ round trips between McCook and Hastings, Neb. He was paid 8.44c per mile, making 132 miles per trip. The rate of pay for each trip was \$11.14, and for the 4,092 miles run in that month, the engineer received \$345.34. Total time on duty during the month was 71 hrs. 13 min. The engineer was off duty at away-from-home terminal point 78 hr. 14 min. He had also 594 hr. 33 min. off duty in the 744-hr. month at his home terminal. In short, 79.9 per cent of his off-duty hours occurred at his home terminal. With the \$3 per "day" increase now being proposed, the engineer would have received \$468.07 for the 31 trips, with average earnings per hour on duty of \$6.572 instead of the present \$4.849. This represents an increase of 35.55 per cent.

Mr. Swacker raised the question of how a man might benefit by reaching an away-from-home terminal an hour or two early under the speeding up of fast trains. He thought the man would more than likely spend more money. Counsel Aronson interposed that since the rules are not inflexible and since a man need not wait for a particular outgoing train, it "mathematically follows he would be available for a return trip two hours earlier."

Present Traffic Not Normal

J. G. Kerr, chairman of the Southern Freight Association, and eighth witness for the carriers, brought out certain elements which will affect the amount of the total traffic in this country which the railroads can expect after the war, explaining, however, that he wished to "avoid the field of prophecy." Remarking on the "abnormality" of the present war-time traffic, he said the current rise in business was due to the tremendous needs of war industries, to the oil being shipped by rail, to the coal movement into New England which had formerly gone by water, and to the temporary handling of truck traffic by the railroads.

Emphasizing the growth of competitive forms of transportation during the 20 years prior to 1941, Mr. Kerr pointed out that registrations of motor trucks increased more than 500 per cent in that time. He also mentioned the shifting of livestock traffic from rail to highway, noting that at 17 principal markets the railroads delivered 94 per cent of the livestock in 1921, while by 1942 the trucks increased from their previous 6 per cent to 60 per cent.

In the case of air travel, Mr. Kerr said that total miles flown increased "from less than 5,000,000 in 1926 to more than 133 million in 1941. In the same interim, passengers carried increased from 5,782 to 4,060,505, there were 19,209,671 lb. of freight handled in 1942 over 3,555 in 1926, and the volume of mail increased from 228,087 ton-miles to 12,900,405 ton-miles. These, he stated, were "only scheduled air line operations."

Discussing inland waterway competition, the witness asserted that barge lines in the Mississippi Valley experienced a traffic rise from 669,550 tons in 1921 to 4,221,748 tons, in 1942, this representing an increase of 600 per cent. In the same period, tonnage on the New York State Barge Canal rose more than 200 per cent.

"These figures emphasize the growing importance, year by year, of other forms of transportation," Mr. Kerr concluded, and "when the war ends, we may expect the railroads to face greater competition than ever before."

Ninth witness for the carriers was A. F. Cleveland,

vice-president of the Association of American Railroads. Mr. Cleveland said railroad earnings for 1942 may be reduced between \$175,000,000 and \$200,000,000, if present government contentions with respect to the applicability of land-grant rates prevail. He asserted that land-grant deductions in the fall of 1941, were \$3,000,000 a month; in November, 1942, they had reached \$20,000,000 a month. Moreover, Mr. Cleveland went on "the government is contending that money heretofore paid the railroads is subject to recovery under the land-grant deduction provisions. . . . We do not know what is going to happen when the federal General Accounting Office completes its post audits. There are many transactions that took place in 1942 and even back of 1942 where the railroads have billed the government at the normal commercial rates, where those rates have been paid and where the money has been reported as railroad earnings, but all of those bills must be finally audited by the General Accounting Office."

F. H. Stull, chief train dispatcher, on the Great Northern, followed Mr. Cleveland. He said that men away from home for unexpectedly long periods are "exceptions to the rule." He explained the reason for long layovers at Fargo, which had been referred to by A. F. Whitney, president of the Brotherhood of Railroad Trainmen. In such instance, according to Mr. Stull, delays were due to heavy snows, resulting in a lot of "soft track" and "delayed movements." The witness was asked if it were customary to delay trains in order to wait for one or two cars, as had been asserted in previous testimony. He replied this was "not the general practice."

Testimony on costs of long lay-overs to the men was introduced by counsel for the Western Carriers' Conference Committee, F. D. McCarthy. It showed that on a reported two-night layover at an away-from-home terminal of two Union Pacific employees, hotel registers in Seattle were combed and neither of the two men were listed. At this same terminal the U. P. has a number of free sleeping accommodations. It has subsequently been learned, reported Mr. McCarthy, that neither man was forced to make any expenditure for a room, one having stayed as a guest in the home of the engineer, and the other is known to have slept free of charge in the passenger station.

Rates Allow for Away-from-Home Expenses

Later Mr. Aronson introduced an exhibit which purported to show that "rates of pay fixed for men in road service have always taken away-from-home expense into consideration."

Daniel P. Loomis, executive director of the Association of Western Railways, testified that average amount of pay for a railroad employee during a year is "consistently greater" than that paid a worker in other industries.

Full-time equivalent earnings in the railroad industry, stated Mr. Loomis, averaged \$2,036 per employee in 1941. In that same year, corresponding annual earnings per employee in all occupations in the country averaged \$1,478, the average railroad worker being 38 per cent better off. From 1929 to 1941, average annual earnings of all workers increased by only \$17; during the same period, average annual earnings of railway employees increased by \$289. "The railroad average was consistently greater than the all-employee average for each year since 1929, and by an increasing margin during the period," Mr. Loomis pointed out.

Average annual earnings in railway train and engine

service amounted to \$3,088 in 1942, he added. In December, 1942, they were "18.7 per cent above the durable manufacturing group; 31.4 per cent above the average for all manufacturing industries; and 56.4 per cent greater than the average for non-durable manufacturing industries."

H. E. Stevens, vice-president of the Northern Pacific, stated that the "increase in volume of business being handled by the carriers during the present emergency has had the effect of automatically raising the average yearly earnings of the operating group", and introduced figures from his railroad to substantiate his observation.

"Average monthly earnings of this group of employees for the first four months of 1941 were \$227; for the first four months of 1942 they were \$253, and for the first four months of 1943 they were \$276. Increase of 1943 over 1941, 21.6 per cent." Furthermore, he said, "About 11 per cent of the increase of 1943 over 1941 is attributed to the wage increase of the 1941 Mediation Agreement."

Says "Ability to Pay" Prompted Demand

Discussing the carriers' "ability to pay" an increased wage, Mr. Stevens said that in his judgment, "stripped of trimmings and window dressing," this was "the principal motivation of the present demand." He observed that in 1941 employees had been given a "formula" for participating in increased earnings, but had rejected them at the wage hearing "for the reason that the employees preferred writing into their contract definite increases in the basic wage scale", experience having proven, he said, "that changes in basic rates once written into the schedule during periods of good business are not reduced when normal or even subnormal conditions overtake the economy of the country."

Explaining the tax situation of railroads, the witness remarked that in a period of low earnings, the tax item alone "may be sufficient to throw carriers that barely kept out of receivership during the last depression into the hands of the courts." He said further that no railway is ever a finished plant, adding that the carriers should be permitted to invest in their properties a large part of the net income they now temporarily enjoy in order to equip themselves to handle increases in the war load and to prepare for the era of intense competition which will follow the war.

Commenting on the inflationary effects of higher rates of pay in the railroad industry, Mr. Stevens asserted that "any increase whatever in the basic wage scales of this highly paid group of railroad employees cannot be brought within the limits of any exceptions made in executive stabilization orders and the directives issued thereunder." He said that an increase in the buying power of any large group of employees, and particularly those of an industry "whose operation touches every town of importance in the country," can be only "inflationary in trend."

The witness believes it "inevitable" that if higher basic wages are effected that higher freight rates will result. "It is likewise inevitable that these increases will be passed on to the consumer," he suggested, "thereby starting another cycle of wage increase to meet the increased cost of living, and so on and on ad infinitum."

Mr. Stevens characterized present rail traffic as highly abnormal, stating that western lines are "swollen not only by war business but also by business which in normal times moved by other agencies of transporta-

tion." In the latter connection he mentioned the diversion of Panama Canal traffic to the rails. He thinks, too, that with the building of "enormous fleets of ships", which after the war must carry traffic or be dismantled, there can be an expected increase in water traffic; and he anticipates also a greater-than-normal highway traffic, while pipe lines will "divert a substantial percentage of the oil formerly handled by the rails." Moreover, Mr. Stevens foresees that airplanes, though they may not become a large factor in bulk transportation, will nevertheless skim off some of the cream of the passenger, express and mail traffic, with serious results to railway net earnings. "It is my opinion," he added "that the railways will do well to hold 50 per cent of the total transportation business of the country after the war is ended."

E. L. Oliver, statistician for the transportation unions, was first witness called in rebuttal by Counsel Flynn. Mr. Oliver introduced further exhibits in an attempt to dispute figures set forth by both Dr. Julius H. Parmelee, director, Bureau of Railway Economics, A. A. R., and J. Elmer Monroe, assistant director of that Bureau. Whereas Dr. Parmelee had said the rate of increase in traffic and revenues for the early part of 1943 had shown "upward trends," and that for the remainder of the year there would be a deceleration in this rate, Mr. Oliver anticipates a \$3,394,375,000 net revenue from railway operations in 1943 as compared with \$2,865,000,000 for 1942, based he said "on the assumption that revenue ton miles and passenger miles will continue at current levels." Mr. Monroe had shown the average hourly rate for a road passenger conductor to be \$1.792. Mr. Oliver's figure was \$1.15. Mr. Oliver questioned Mr. Monroe's method of calculation but admitted he had not gone over the Monroe exhibit in any detail. Counsel Aronson asked if the witness had "purposely bypassed" this testimony. Judge Stacy reminded the witness he regarded Mr. Monroe's testimony as "significant," since the latter had undertaken to refute certain of Mr. Oliver's statements. "I would assume," continued the Judge, "that if you were coming back in rebuttal, you would have examined Mr. Monroe's testimony very carefully." He added "in other words you have no criticism to make of the figures offered by Mr. Monroe."

Then came a statement by H. W. Fraser, president, Order of Railway Conductors, to the effect that conductors "in most cases" do make a check of their trains, this to refute the testimony of George W. Rainey, who on the stand for the carriers said that this is not now the general practice in most large terminals.

On advice of counsel, Witness Oliver returned to the stand to take further exception to Mr. Monroe's exhibit. He observed the "very least" the carriers could have done would have been to put before the Board figures for January, 1941, hourly earnings compared with the present situation. Mr. Oliver proved a recalcitrant witness on cross-examination, and Counsel Aronson asked Judge Stacy to direct the witness to answer the questions which were put to him. This was done twice.

W. B. Woodward, Jr., general chairman, Brotherhood of Locomotive Firemen & Enginemen, spoke of firemen on the Pennsylvania, and expressed surprise at the average rate of pay which T. O. Taylor had shown for the carrier exhibits. Mr. Taylor had shown average earnings for the month of October, 1942, for firemen in service one year or less at \$252.51, for the entire Pennsylvania. Witness Woodward considered this figure "excessively high." Counsel Aronson remarked he was "glad to have a description of what those earnings mean."

Railroads-in-War News

I.C.C. Will Interpret Bid Rules Leniently

That will be war-time policy if roads comply with spirit of the regulations

The Interstate Commerce Commission this week made public a letter indicating that commission regulations governing competitive bids to carriers under Section 10 of the Clayton Antitrust Act would be leniently interpreted for the duration of the war, so long as the carrier complies with the spirit of the statute and the regulations.

The letter, from Commissioner Porter, chairman of the commission's Division 4, was in reply to a request for modification of the regulations submitted by F. G. Dorety, vice-president and general counsel of the Great Northern.

"Because of emergency conditions due to the war which make it impracticable for industries such as the lumber industry to obligate themselves for any extended period in advance to furnish any specified amount of materials at any particular time or price," the letter read, a railroad will have "complied substantially with the spirit of the statute and of the commission's regulations" if it advertises for bids under certain outlined conditions, "provided, of course, that if all or any part of the materials for which the bids are asked is furnished by a concern having a community of interest with the carrier, that concern's bid is no less favorable to the carrier than any of the bids received from other bidders."

The conditions outlined in the letter would "relieve carriers from the duty of calling for bids under the rigid specifications required by the regulations, and permit them to ask prospective bidders simply to offer to supply such materials as the carriers might require during the calendar year in which the request for bids is published, and at the ceiling prices fixed by the Office of Price Administration or other governmental authority, or a specified discount below such prices, the bidders to be required to state the point at which they are willing to furnish such materials f. o. b. cars and the length of time after the placing of specific orders by the carriers which the bidders would require for furnishing all or any part of such materials. Also, the bidders would be permitted to insert in their bids the proviso that the furnishing of all or any part of the materials, and within the time specified, would be subject to their ability to manufacture and deliver the materials, and subject to approval by the authorized

representatives of the War Production Board."

In view of this interpretation of the regulations, the letter indicated, no necessity exists for a formal modification of their terms.

Scrap Manila Fibre Wanted

A memorandum calling attention to the serious shortage of manila fibre in the United States was sent to railroad salvage directors last week by Bert C. Bertram, chief, railroad unit, industrial salvage branch of the War Production Board. A nation-wide salvage campaign to collect every available inch of scrap or surplus manila rope has been undertaken by the WPB, the memorandum indicates, and the co-operation of railroad salvage forces is solicited. In addition to its normal uses in the manufacture of rope and cordage and insulating paper, the fibre is required, Mr. Bertram pointed out, for the production of gaskets for tanks, airplanes, and other military vehicles, and for special papers used by the medical and chemical warfare branches of the Army.

Oil Deliveries in East Exceed Million Barrels a Day

The movement of petroleum products into the Atlantic coast territory by rail exceeded an average of a million barrels a day for the first time in history in the week ended June 26, Petroleum Administrator Ickes announced July 3. The daily average for that week was 1,060,744 barrels a day, exceeding the previous record by 63,179 barrels.

Achievement of the new record resulted from loading and dispatching from inland rail terminals 32,218 tank cars and more than 2,000 box cars laden with petroleum products in metal drums, Mr. Ickes disclosed. There are now 73,862 tank cars hauling oil into District No. 1, according to Deputy Administrator Ralph K. Davies, and about 6,000 additional tank cars are employed in distribution within that area, so that about 75 per cent of all tank cars in the nation's petroleum service are engaged in the East Coast movement.

Mr. Davies also said that oil would be flowing from Texas to the Atlantic seaboard through the extended "Big Inch" pipeline by August 1, though the eastern link in that facility is not expected to be working at its 300,000 barrels a day capacity for some time thereafter, pending completion of pumping stations.

The all-rail record movement in the week ended June 26 resulted from an average daily delivery in tank cars of 999,684 barrels, which exceeded the previous record for such traffic by 29,149 barrels a day. Shipments in box cars accounted for the additional quantity delivered.

Heavy July 4 Traffic Broke Many Records

All roads did a big business, most of them hitting new highs for a week-end

Railroads serving the Atlantic Coast states reported extremely heavy passenger traffic business over the fourth of July holiday—in most cases the greatest experienced in the history of the roads concerned, and in all instances well over the figures recorded for the same holiday period last year.

All available equipment was used on most roads. Trains were reported well-loading with crowding and "standing room only" on some runs. Congestion, on the whole, however, was not nearly so bad as had been anticipated. Trains on most of the roads were anywhere from a few minutes to an hour late in arriving at destination, but no one was left stranded or turned away.

One peculiar aspect of the situation was the fact that the number of homeward bound passengers was so much smaller than the number which left the various terminals. The failure of so many to return from the week-end, however, was attributed to the fact that a great many passengers were probably starting on their summer vacations, to be gone a week or more. This easing off of inbound traffic was, of course, a welcome relief to most roads.

During the period from June 28 to July 6, the New York Central carried the greatest passenger traffic in the history of that road. It handled more passengers on July 1 than on any succeeding day. An unusual increase in traffic was noticed as early as June 28 and 29—which would indicate that some travelers, at any rate, heeded the warnings of the railroads and the ODT to travel before the peak of the holiday rush.

Extra sections were run on the Central's "Empire State Express" and the "Laurentian." The road also ran some extra multiple-unit cars on short haul runs to Poughkeepsie, N. Y., and other vacation points to take care of heavy traffic.

Travel to seashore points was exceptionally heavy. The Jersey Central reported one of the heaviest week-ends experienced on the road, although there was no shortage of equipment. Trains were crowded, but all prospective customers were taken care of. The Long Island showed a rise of about 50 per cent over the comparable week-end last year.

Traffic on the New York division of the Pennsylvania was especially heavy,

particularly between New York, Philadelphia, Washington and St. Louis. Numerous army camps are located in the territory covered by this division and the extremely heavy traffic was attributed to the fact that families and relatives of men in the service utilized the week-end to visit the camps. An increase of 9 per cent over the Memorial day holiday in passenger traffic was reported by the P. R. R. on its New York to Philadelphia run. Travel to Washington, D. C., was the heaviest and extra sections were run on most trains to that point. The heavy incoming traffic continued through July 6 and 7, and the road was still operating extra sections on those days.

The New Haven reported that while the Fourth of July holiday is usually the biggest week-end of the year on that road, this year it proved to be a record one. July 3 and 4 were the heaviest days for outbound traffic on this road, although traffic started moving two days before the normal starting day.

"Haulage Conservation" In—"Controlled Shipments" Out

The War Production Board's General Transportation Order No. 1 has been re-titled General Haulage Conservation Order T-1, according to a WPB announcement July 1, and its field, called "controlled shipments" in the original order, has been designated instead as "haulage conservation." Certain amendments to the order became effective at the same time, but its general requirements, reported in *Railway Age* of February 6, page 330, remained unchanged.

More "Don't Travel" Advice

Another press release in the Office of Defense Transportation's "Don't Travel" campaign appeared July 7, addressed particularly to the development of "intramural programs" among employees in all branches of business and industry for the purpose of spreading vacation periods and making vacation trips in the middle of the week rather than at week-ends. The usual admonitions about traveling light, spending the whole vacation in one place, carrying box lunches, and preparing for late trains and missed connections were included in the statement.

Committee on Fair Employment Practice Gets Under Way

The recently appointed new Committee on Fair Employment Practice was organized at a two-day session in Washington, D. C., this week, according to an announcement by its chairman, Francis J. Haas, and it has undertaken to formulate an agreement to "implement" the President's executive order "assuring non-discrimination because of race, color, creed and national origin."

In undertaking to dispose of several cases pending on its docket, some of which were inherited from the former committee of the same name, the new committee set for hearings on September 15, 16 and 17, complaints alleging discrimination against negro employees by railroads and railroad labor unions in the South. Other cases

Promotion for E. T. O. Chief of Transportation

The Senate on July 3 confirmed the nomination of Frank S. Ross to the temporary rank of brigadier general, a promotion from his recent rank as colonel. A photograph and a sketch of the career of General Ross appeared in *Railway Age* of March 6, page 456. In his new rank he continues as chief of transportation in the Army's European Theater of Operations, having returned to his headquarters in Great Britain from a visit to the United States after a transportation system for United States forces in North Africa had been established.

involving "large numbers of war workers" also will be considered by the full committee "as soon as" settlement by negotiation has failed, it was said, while 12 regional offices will be set up to handle local problems.

The full membership of the committee attended the opening session, and Chairman Haas stated that it is planned to meet regularly every two weeks. The committee consists of Samuel Zemurray, president of the United Fruit Company, P. B. Young, editor and publisher of the Norfolk, Va., *Journal and Guide*, and Sara Southall, supervisor of employment and service of the International Harvester Company, representing "industry," and Boris Shishkin, economist of the American Federation of

Labor, John Brophy, director of industrial councils of the C. I. O., and Milton P. Webster, international vice-president of the Brotherhood of Sleeping Car Porters, representing "labor."

Asks Less Travel by Football Teams and Spectators

A statement was issued July 4 by Director Eastman of the Office of Defense Transportation asking revision of intercollegiate and interscholastic athletic schedules to bring about a drastic curtailment in travel by football and other athletic teams similar to the rearrangement of schedules recently effected by the Pacific Coast Intercollegiate Athletic Conference, which the statement praised.

Schedule revisions worked out by this organization will result in a reduction of 66,166 miles, or 69 per cent, in distance traveled by football teams in the 1943 season, it was pointed out, and the use of sleeping cars has been eliminated entirely. It was also explained that the practice of scheduling "home and home" games should eliminate the incentive for students or alumni to accompany teams on trips.

Mr. Eastman's statement pointed out that a number of colleges and universities have given up intercollegiate athletic competition for the duration of the war, while others have taken action to cooperate with the ODT "travel conservation" program. "I must request colleges and schools which have not already acted to make plans now that will restrict to a minimum the travel of football and other athletic teams, and the travel of spectators, next season," he said.

Materials and Prices

Following is a digest of orders and notices of interest to railroads, issued by the War Production Board and the Office of Price Administration since June 26.

Boilers, high pressure—Limitation Order L-299, issued July 1, prohibits the production, fabrication or delivery of any power boiler having a greater metal thickness or quantity of steel than needed to meet the minimum thickness requirements of Section I (Edition 1940) of the American Society of Mechanical Engineers Boiler Construction Code, except boilers produced or fabricated before July 1, or which have been altered in thickness as approved by WPB.

Boilers, low pressure—Limitation Order L-187, as amended July 1, permits, during the month of July and each succeeding month of 1943, any manufacturer of low pressure cast iron boilers to manufacture, fabricate or assemble the parts by using an aggregate weight of iron and steel not in excess of 100 per cent of the total weight of iron and steel which was used during the corresponding calendar month of 1940.

Chain—Limitation Order L-302, issued June 26, restricts the production of any chain or chain assembly to types, sizes, specifications and finish contained and prescribed in the schedule. The provisions do not apply to any chain received within 45 days after June 26; to any chain required for the repair or maintenance of existing chain or chain assemblies when the repair or maintenance requires chain of special link dimensions. The order specified the permissible kinds of welded steel coil chain and wrought iron dredge or crane chain. Railroad brake chains must be made from proof coil chain in $\frac{1}{16}$ in., $\frac{1}{8}$ in., $\frac{9}{16}$ in., $\frac{5}{8}$ in., and $\frac{3}{4}$ in. sizes, self-colored; railroad safety chains must be made from proof coil chain in $\frac{1}{8}$ in., $\frac{9}{16}$ in., $\frac{5}{8}$ in., $\frac{3}{4}$ in., $\frac{7}{8}$ in., 1 in., $1\frac{1}{8}$ in., and $1\frac{1}{4}$ in. sizes, self-colored; and railroad switch chains must be made from proof coil chain in $\frac{5}{8}$ in., $\frac{3}{4}$ in., $\frac{7}{8}$ in., and 1 in. sizes, self-colored.

Construction machinery—Limitation Order L-192, as amended June 1, prohibits a producer from delivering in any month more than 75 per cent of his combined production and inventory of any repair part to war agencies, if doing so prevents delivery of that specific repair part in that month to any other person, thus reserving for non-war agencies or civilian users 25 per cent of the combined production and inventory of every repair part produced. Dealers or distributors repair parts orders to replace inventory or to fill orders not yet sold are not considered in arriving at the 75 per cent division. Any user of equipment listed in the order need only execute a short certification to obtain the repair parts for actual or impending breakdown or sound maintenance of equipment. The certification represents that the parts are required to put the equipment into sound operating condition; that he does not have similar parts on hand or on order, and has complied with the terms of Limitation Order L-196 requiring registration with WPB of certain items of construction equipment owned by him. All persons, including war agencies, are required to execute the L-192 certification when ordering repair parts for actual or impending breakdown.

Copper fixtures—Conservation Order M-9-c-4, as amended June 24, expanded the list of copper and copper base alloy building materials which civilians are not permitted to use. Placed on the restricted list were cornices, fences and gates, flashings and flashing valley lining, gravel stops and snow guards, window frames and sills, ventilators, skylights and vents. The amended order also confines the use of copper and copper base alloy fittings for a water supply or distribution system outside of a building to cases where fitting is to be installed underground. Fittings may be used for repair purposes to connect new lead or iron pipe to copper or brass pipe or tubing already in place.

Electrical conduit—Limitation Order L-225, as amended June 24, prohibits the manufacture of rigid electrical conduit during any calendar quar-

ter in excess of one-tenth of the total weight of metal during the calendar year 1941. No person may install rigid electrical conduit in a size greater than the minimum size permitted by the 1940 edition of the National Electrical Code, and no person may install rigid electrical conduit sizes $\frac{1}{4}$ in. to 2 in., inclusive, except as authorized by special provision.

Lighting—Design Guide for Interior Electric Lighting and Wiring for Wartime Construction, released July 1, presents the conservation policy followed by WPB when considering applications for priority assistance to obtain fixtures and other materials required in lighting installations. Limitation Order L-78 controls the production of fluorescent lighting fixtures, while other electrical discharge lamps were standardized under the terms of Limitation Orders L-28 and L-28-a.

Oxy-acetylene apparatus—General Conservation Order L-268, as amended June 22, prescribes that no non-ferrous metals or stainless steel may be used in the manufacture of certain parts of manually operated oxy-acetylene apparatus, and that no manufacturer or dealer may sell any blow pipe or torch tips or hose connections as part of the blow pipe or torch but must sell such articles only as separate items of equipment bearing an independent sales price. Any manufacturer who maintains facilities for, and performs the function of, repairing oxy-acetylene apparatus manufactured by him may repair any welding or cutting tips of his manufacture, except to the extent that his repair facilities are inadequate to fill the orders so received. The order prohibits the purchase of oxy-acetylene apparatus parts which will increase the inventory beyond an amount equal to that used for repair purposes during the preceding two calendar months, and no person may purchase any oxy-acetylene apparatus as spare or standby equipment if the purchase will increase the stock beyond one piece of spare apparatus for each ten pieces of like apparatus, or fraction thereof, in operation.

Priorities—Priorities Regulation 3, as amended June 30, prohibits a person from duplicating, in whole or in part, purchase orders placed with one or more suppliers for delivery of material to which he has applied or extended a rating in such manner that the amount of the material ordered exceeds the amount to which he is authorized to apply or extend the rating, even though he intends to cancel or reduce his purchase orders to the authorized amount prior to completion of delivery. In List A the order enumerates items which may be delivered without regard to preference ratings of any kind, and in List B, items for which preference ratings assigned to the delivery of maintenance, repair and operating supplies may not be used are enumerated.

Railroad equipment—Limitation Order L-97-d, issued June 26, lists critical components for locomotives and tenders and requires each manufacturer of a critical component listed to file the form designated in a schedule on the dates prescribed, showing the manufacturer's production capacity and orders unfilled, received, shipped, cancelled and scheduled for shipment for the period specified in the form. Each manufacturer must also file a form showing the manufacturer's delivery schedule for the particular critical component for the period specified. WPB may direct the return or cancellation of any order on the books of a manufacturer; direct changes in the delivery or production schedule of a manufacturer, or allocate orders placed with one manufacturer to another manufacturer. The components affected by the action listed in Schedule A of the order include air brake actuating mechanisms, beds, bell ringers, blow off cocks, blow off cocks operating cylinders and control valves, blow off mufflers, boiler checks, boosters, foundation brakes, clasp brakes, circulators, coal pushers, compensators and snubbers for driving boxes, cylinder cocks, cylinder cock operating valves, drifting valves, driving box lubricators; also, feed water heaters, including pumps; pneumatic fire doors, frames, grates, grate shakers, headlight equipment, live steam injectors, exhaust steam injectors; flexible air, steam and oil joints; mechanical lubrication equipment, hydrostatic lubricators, arch tube plugs, boiler drop plugs, circulator plugs, washout plugs, radial buffers, relief valves, power operated reverse gears, sanding equipment, driving springs, engine truck springs; also, tender springs, trailer truck springs, stokers, superheaters, syphons, tender beds and frames, front end throttles, engine truck frames, tender truck frames, trailer truck frames, valve

gears, water gage cocks, water columns, water gage guards, water gages, and whistles.

Scrap rope—General Conservation Order M-294, as amended July 2, prohibits the use of waste manila rope as a raw material in the manufacture of any product other than in the manufacture of rope or in the manufacture of paper.

Prices

Brick—Maximum Price Regulation No. 416, effective July 3, placed basic refractory brick and kindred basic refractory products used in lining furnaces under a separate price regulation. Price levels, which have undergone no change since September and October, 1941, are not altered by the action, although specific dollars-and-cents prices replace freeze prices.

Fence posts—Revised Maximum Price Regulation No. 324, effective July 2, establishes specific dollars-and-cents prices for all principal grades of wooden fence posts at production, wholesale and retail levels. The new maximums authorize some increases ranging up to 35 per cent in the prices for posts of southern yellow pine and western red cedar, but no change from the March, 1942, level is made in other species. Previously, maximum prices for wooden fence posts were established by the General Maximum Price Regulation as the highest levels sellers charged during the month of March, 1942, except for northern white cedar fence posts produced in Michigan, Minnesota and Wisconsin. These were provided with specific dollars-and-cents prices on February 18 of this year in Maximum Price Regulation No. 324.

Hardware—Maximum Price Regulation No. 413 (hinges and butt hinges), effective July 3, establishes the maximum manufacturers' prices for hinges and butt hinges at the levels of October 1, 1941, and also establishes ceilings for sales by jobbers which will allow them their customary markup of one-third. The measure will reduce manufacturers' prices about 2 to 3 per cent and will eliminate a price increase announced by part of the industry on October 10, 1941. The new ceilings reflect both the manufacturers' published discounts of October 1, 1941, from March, 1941, list prices and hidden discounts which were found to be generally in effect, thus assuring purchasers from manufacturers of the same prices they actually paid for hinges on October 1, 1941. All types of hinges covered by the measure are listed in the regulation.

Lumber—Amendment No. 6 to Maximum Price Regulation No. 223 (northern hardwood lumber), effective July 3, announced specific dollars-and-cents maximum prices for additional grades and items of northern hardwood lumber. The new specific ceilings are established for white oak and red oak structural stock or sound square edge material, and white oak and red oak freight car stock, common dimension, mine car lumber. They are maximum prices previously approved for use by a number of individual mills. Establishment of the specific ceilings eliminates the necessity for mills filing the proposed prices in the future and, at the same time, creates uniform prices for all sellers. The amendment requires that in sales of green lumber sellers must deduct 10 per cent from the maximum prices for air-dried lumber. Green lumber is defined as lumber that has not been stacked on the yard for air-drying. A purchaser may waive any requirement as to moisture content. If the lumber has been stacked on the yard, the air-dried price shall be applicable. If the lumber has not been stacked on the yard for air-drying, the green price shall be applicable.

Revised Price Regulation No. 215, effective June 29, establishes specific maximum prices for softwood lumber sold by distribution yards, both wholesale and retail, in 16 New England, Middle Atlantic area and Middle Western states, part of Virginia, and the District of Columbia. The new maximum prices are created through issuance of a schedule of specific markups which may be added by yards to mill dollars-and-cents prices provided in the various lumber regulations. Mill prices, plus freight, plus these specific markups, give distribution yards the maximum prices at which they may sell softwood lumber.

Maximum Price Regulation No. 412, effective June 29, establishes dollars-and-cents maximum prices for tidewater red cypress lumber. Previously, this lumber was priced under the General Maximum Price Regulation, and maximums

were the highest prices sellers charged during the month of March, 1942.

Amendment No. 5 to Revised Maximum Price Regulation No. 97 (southern hardwood lumber), effective July 2, establishes dollars-and-cents maximum prices for southern hardwood rough construction boards. Base prices have been established as applying to rough boards. The basic ceiling price for No. 2 construction boards, rough, random width, is \$28 per m. bd. ft., and replaces a price of \$33 per m. bd. ft. for machined No. 2 stock. No. 1 construction boards retain their same price relation to No. 2, that is, \$6 higher. In addition, the amendment establishes a maximum price of \$17 per m. bd. ft. for No. 3 construction boards. With the differentials for machining four sides and dressing to standard widths, a price of \$33 per m. bd. ft., as formerly established, will still be applicable for finished and dressed stock. In the case of construction boards machined one or two sides and not dressed for specified widths, the new price reflects a reduction from the former price. This reduction is offset by increases provided in the amendment in the prices for No. 2 common and No. 3 common hardwood lumber in the species from which construction boards are produced. These increases are \$2 per m. bd. ft. for No. 2 common and \$1 for No. 3 common. The amendment also establishes specific dollars-and-cents prices for white oak or red oak structural stock or sound square edge material, also white oak or red oak freight car stock, common dimension, mine car lumber from southern areas.

Paints—Order No. 465 under Regulation 188, effective June 30, announced that the maximum prices for certain ready mixed interior and exterior paints will not have to be reduced by paint manufacturers because of changes in formulae necessitated by limitation orders limiting the amounts of linseed and fish oils used in their manufacture, provided the revised products give fairly equivalent serviceability. Paint manufacturers are required to use less amounts of linseed and fish oils in certain specified types of paints by Order M-332, effective July 1. Structural steel finishes, interior and exterior, are not included in the order and will continue to be priced under the General Maximum Price Regulation.

Railroad gasoline—Amendment No. 56 to Ration Order 5C, effective July 6, excludes railroads, bus and truck lines and others who buy gasoline solely for their own use from its definition of licensed distributors. Under the revised definition, a licensed distributor is any person who must account directly to the motor fuel tax administration of a state for gasoline which he receives for sale within that state.

Red lead—Amendment No. 1 to Regulation 180, effective May 14, exempts red lead and orange mineral color pigments from the price regulation on color pigments. As originally contained in Revised Maximum Price Regulation No. 180, the definition of color pigments was broad enough to include red lead and orange mineral pigments which are not produced by the manufacturers who produce the pigments covered by the measure but by a different class of producers.

Sash and doors—Amendment No. 1 to Maximum Price Regulation No. 293 (stock millwork), effective July 3, increases the prices of wooden doors and sash manufactured from lumber released under Limitation Order L-290.

Steel castings—Amendment No. 6 to Revised Maximum Price Schedule No. 41, effective June 28, establishes maximum charges producers may make for machining of steel castings. Prices for machining performed by the producer are established on the basis of his March 31, 1942, machining rates or on his base period costs and profit margin. The amendment also re-establishes prices for miscellaneous castings appearing in the Report of the Steel Founders' Society of America for the third quarter of 1941 as maximum prices. These prices once were in effect but had been revoked February 20, 1943, and sellers were instructed to submit proposed prices for such items to OPA for approval.

Storage tanks—Maximum Price Regulation No. 411, effective July 2, establishes specific maximum prices for re-usable steel storage tanks, field assembled. For re-usable steel bolted storage tanks, dollars-and-cents prices per tank are provided for those of various capacities. For re-usable steel riveted and welded tanks, dollars-and-cents per ton prices are established.

GENERAL NEWS

Would Bar Railroads From Highway Field

Wheeler planning legislation to keep them out of bus and truck business

Chairman Wheeler of the Senate committee on interstate commerce asserted on the floor of the Senate July 1 that when Congress returns from its Summer recess he intends to introduce "proposed legislation to prevent railroads from owning buses and trucks." He made the remark while helping Senator Shipstead, Republican of Minnesota, register indignation over the recent Supreme Court decision upholding an Interstate Commerce Commission ruling permitting discontinuance of proportional or reshipping rates lower than local rates on grain arriving at Chicago by barge, while permitting such rates to be continued on ex-lake or ex-rail grain at that point.

While his statement indicated that his proposed legislation would be designed to exclude railroads from the bus and truck fields only, Senator Wheeler added that he did not think the railroads should own air transport or water transportation facilities either.

"I think," he said, "the railroad business should be divorced from the bus and truck business. I think express companies, which are owned by railroads, should not be permitted to engage in the trucking business. I think the railroads should not be in the trucking business; I think the railroads should not be in the water transportation business, and I think they should not own air transportation facilities." He went on to refer to the view "in the minds of many persons" that all forms of transportation should be owned by one group. He will oppose such a movement "with all my strength"; because if that ever happens "we will have no competition in transportation."

Senator Clark, Democrat of Missouri, was glad to hear Mr. Wheeler mention air transportation in the foregoing connection; because "the inter-oceanic steamship companies and the railroads are already prepared to move in and try to take possession of the vast field of development which will unquestionably take place in aviation when the war is over." Mr. Clark thinks this is "completely wrong." From there the discussion went on to railroad directorships. Mr. Wheeler suggested that states traversed by railroads should have representatives on the board of directors.

Meanwhile Senator Shipstead had denounced the Supreme Court decision as one which bore out fears of Transporta-

California Waives Full Crew Law

The California Railroad Commission has issued an interim order permitting railroads operating in that state to disregard the full train crew law when necessary because of a shortage of brakemen. Hearings will be held at various terminals to determine whether a final order will be entered suspending the provisions of the law.

tion Act of 1940 opponents who predicted that inland waterway transportation would suffer "under the domination and regulation" of the "railroad-minded" I. C. C. The decision involved was reviewed in the *Railway Age* of June 19, page 1235. In the words of Mr. Shipstead it "repudiates" 1940 act's declaration that the "inherent advantages" of each form of transportation should be preserved.

"The net result of the decision," he said, "is to destroy the great bulk of the grain movement on our inland waterways, the savings on which go to the farmers. . . . The proposal of the railroads to abandon and to deny to shippers by barge, by inland waterways, the same proportional rate to the East which grain coming down the lakes or into Chicago by rail would enjoy, was approved by the Interstate Commerce Commission. As a matter of fact, as a result of the decision, it costs eight cents a hundred pounds more to ship grain to the East if it comes to Chicago by water, that is, over the inland waterways, than if it comes by rail or down the lakes."

The dissenting opinion, written by Justice Black, appeared to Mr. Shipstead to be "ruggedly honest in its reasoning", and "clear in its understanding of the real public issues involved." Senator Wheeler, Senate sponsor of the Transportation Act of 1940, assured Mr. Shipstead that the ruling of the I. C. C. and the Supreme Court majority "are both contrary to the construction which I have placed on the law and the construction which I told the Senate would be placed on the law."

Whereupon Senator LaFollette, Progressive of Wisconsin, called upon those interested to make the first order of business after recess a concerted effort "to reverse the flagrant violation of the legislative intent of Congress." Senator Shipstead agreed that such an effort should be made. Previously he had asserted that the commission's action would thwart what Congress had in mind when it passed legislation to spend "hundreds of millions of dollars" on waterways.

\$377 Million Net Income in 5 Mos.

Net railway operating income for same period was \$596,288,148

Class I railroads in the five months ended May 31, 1943, had a net railway operating income, before interest and rentals, of \$596,288,148 compared with \$432,945,839 in the same period of 1942, according to the Bureau of Railway Economics of the Association of American Railroads. The same roads in the first five months of this year had an estimated net income, after interest and rentals, of \$377,600,000 compared with \$211,538,528 in the corresponding period of 1942.

In the 12 months ended May 31, the rate of return on property investment averaged 6.08 per cent compared with a rate of return of 4.10 per cent for the 12 months ended May 31, 1942.

Total operating revenues in the five months of 1943 totaled \$3,599,292,997 compared with \$2,657,071,611 in the same period of 1942, or an increase of 35.5 per cent. Operating expenses in the five months of 1943, amounted to \$2,178,613,872 compared with \$1,778,790,428 in the corresponding period of 1942, or an increase of 22.5 per cent.

Class I roads in the five months paid \$746,121,013 in taxes, compared with \$377,791,527 in the same period in 1942. For May alone, the tax bill amounted to \$160,595,803, an increase of \$60,407,073 or 60.3 per cent above May, 1942. Twenty Class I roads failed to earn interest and rentals in the five months of which nine were in the Eastern district, two in the Southern region, and nine in the Western district.

The estimated net income for May was \$85,100,000, compared with \$63,668,283 in May, 1942, while the net railway operating income for that month was \$128,169,020, compared with \$109,667,562 in the same month last year.

The May gross totaled \$759,330,727 compared with \$601,063,798 in May, 1942, while operating expenses totaled \$454,361,704 compared with \$375,447,890.

Class I roads in the Eastern district in the five months of this year had an estimated net income of \$150,200,000 compared with \$94,643,792 in the same period last year. Their five-months net railway operating income was \$236,251,718 compared with \$182,412,769. Gross in the Eastern district in the five months totaled \$1,603,058,835, an increase of 25.1 per cent compared with the same period in 1942, while operating expenses totaled \$1,030,000,000.

(Continued on page 73)

New Jersey Central Chief Executive

Wyer, consulting engineer and
former Missouri Pacific
treasurer, takes over

William Wyer, whose appointment as chief executive officer of the Central of New Jersey, with headquarters at Jersey City, N. J., was announced in the "Railway Officers" columns of the *Railway Age* of July 3, was born on April 3, 1895, at Concordia, Kan. Mr. Wyer attended Albany (N. Y.) Academy and received an A.B. degree from Yale College in 1916, and a B.S. degree from the Massachusetts Institute of Technology in 1918. In addition, he attended the Harvard University Graduate School of Business Administration and the Cleveland Law School. During World War I, Mr. Wyer was a first lieutenant in the Corps of



Von Behr

William Wyer

Engineers of the United States Army, and from 1919 to 1920 he served with the United States Railroad Administration as clerk, assistant to the assistant director of the Division of Operators, and as assistant to the comptroller, successively. In the latter year he joined the Norfolk Southern as assistant superintendent of transportation, leaving the employ of that road in 1921 to become statistician to the president and later operating assistant to the president of the Denver & Rio Grande Western.

In 1929 Mr. Wyer became assistant to the chairman of the board of the Missouri Pacific, and thereafter served that road successively as secretary, treasurer and director, resigning in 1941 to become senior partner of the firm of William Wyer & Co., consulting engineers, at Newark, N. J.

As a consulting engineer, Mr. Wyer has been dealing with railroad reorganization problems.

C. N. R. to Open Its New Central Terminal in Montreal

On July 14 the Canadian National will dedicate its new Central Terminal at Montreal, with the Honorable J. E. Michaud, minister of transport, officiating. Prior to the opening ceremonies persons attending the opening have been invited by the chairman of the board and the directors to inspect the station. A description of the terminal will appear in the *Railway Age* at a later date.

Truck Restriction Lifted

By Amendment 8 to General Order ODT 21 the Office of Defense Transportation has authorized commercial motor vehicle operators to run trucks without carrying the ODT certificate of war necessity, as previously required, provided that document is in the possession of the ODT or the Office of Price Administration.

O. K. for Barge Terminal Work

"To relieve the tight rail situation," according to a War Production Board statement, authority has been given to resume work on the Knoxville, Tenn., barge terminal which was suspended in March. Preference ratings were restored to the project after a survey of contemplated traffic to be handled through the terminal.

Rio Grande Seeks to Operate Helicopter Service

The Rio Grande Motorways, Inc., subsidiary of the Denver & Rio Grande Western, has filed an application with the Civil Aeronautics Board and the Colorado Public Utilities Commission, seeking permission to operate airplane and helicopter service in its territory, including Denver, Colo., to Los Angeles, Cal.

Contracts for Temperature Control Services

Making its third supplemental report in the Ex Parte No. 137 proceeding involving contracts for protective services, i.e., temperature-control services for the protection of perishable freight against heat or cold, the Interstate Commerce Commission, Division 3, has approved a contract covering arrangements between the Beaufort & Morehead for the period ending June 30, 1943, and contracts extending that contract and like contracts between F. G. E. and 23 other roads through June 30, 1944, and thereafter until terminated on six months' notice.

The same report also approves three contracts superseding temporary arrangements between the American Refrigerator Transit Company and the Denver & Rio Grande Western, the Missouri Pacific, and the Missouri-Illinois. Commissioner Johnson, dissenting in part, would not approve the contract between the Beaufort & Morehead (a non-proprietary line) and the F. G. E., or the extension agreements between the non-proprietary railroads and F. G. E. "because the unit prices are 10 per cent higher than those in contracts with proprietary lines."

I. C. C. Issues Report on Delair Derailment

Excessive speed on a sharp
curve found to have
caused accident

The derailment on the Pennsylvania between Delair, N. J., and Minson, May 23, which resulted in the death of 12 passengers and 2 employees and the injury of 80 passengers and 1 employee, was the result of excessive speed on a sharp curve, according to the report of the investigation by the Interstate Commerce Commission prepared under the direction of Commissioner Patterson.

The circumstances of the accident were outlined in *Railway Age* of May 29, page 1112. As there indicated, the train involved, en route from Atlantic City, N. J., to New York, was derailed on an 0.8 per cent descending grade on a 14 degree 30 minute curve on a 0.84-mile single track line constituting a connection between the double track Atlantic City-Philadelphia main line and the double track Camden-Trenton line. This connection is within interlocking limits, and the rules required that trains moving over it under the slow-approach signal restriction displayed for the train involved should not exceed 15 m.p.h.

Data supplied by the railroad indicated that the maximum safe speed for the locomotive involved on the curve where the derailment occurred was about 27½ m.p.h., and the overturning speed was 47 m.p.h. These data were based on a superelevation of 3 in., however, and the report pointed out that the superelevation at the point of derailment was only 2¼ in. Considering the movement of a test train and the statement of the engineer of the derailed train, it appears, said the commission's report, that the train entered the curve "at a higher speed than that estimated by the engineer." However, it adds, at a point passed over by the locomotive about 160 ft. before it was derailed the alinement changed from a curvature of 13 degrees to a tangent 15 ft. long, which was followed by a curvature of 14 degrees 30 minutes. "These variations would cause the engine to pivot and roll laterally," the report points out. "Evidently excessive speed increased the pivoting and rolling of the engine to such an extent that the flange of a wheel on the left side of the engine mounted the high rail."

The accident occurred about 10.08 p. m. The weather was clear, and the investigation indicated that all signals and all equipment on the train appeared to have functioned as intended. No evidence of dragging equipment, defective track or other unfavorable condition was revealed. The conductor and fireman were killed in the accident; other members of the crew estimated the speed at the time of the derailment as between 15 and 30 m.p.h. However, the report points out that a test train similar to that derailed substantially exceeded the speed estimates of the en-

gineer when brake applications were made as he had said he made them just before the accident occurred.

As previously reported here, the derailed train was made up of a 4-6-2 locomotive and 15 steel cars which had been converted to coaches from Pullman parlor cars. The locomotive and the first 7 cars of the train were derailed and the locomotive and tender and the second, third, fourth and fifth cars were badly damaged.

I. C. C. to Investigate Charges for Half-Stage Refrigeration

Division 2 of the Interstate Commerce Commission has instituted an investigation, docketed as No. 28994, into the reasonableness and lawfulness of railroad tariff charges for half-stage refrigeration service on perishable commodities, and has assigned the matter to public hearing at Washington, D. C., July 15.

Postpones Order on Proposed Pacific Terminal Charge

The Interstate Commerce Commission has postponed from July 2 until August 30 the effective date of its outstanding order requiring cancellation of suspended schedules proposing a terminal charge of five cents per 100 lb. in addition to line-haul rates at Pacific Coast ports. The commission's report in the proceeding (I. & S. No. 5146) was noted in the *Railway Age* of June 5, page 1149.

Burlington Gets Cedar Rapids-St. Louis Bus Line

Purchase by the Burlington Transportation Company, a subsidiary of the Chicago, Burlington & Quincy, of the operating rights and equipment of the M. C. Foster Bus Line, the only through, single line bus operator between St. Louis, Mo., and Cedar Rapids, Iowa, via Keokuk, Iowa, on a highway substantially parallel to the C. B. & Q. line from St. Louis to Burlington, Iowa, has been approved by Division 4 of the Interstate Commerce Commission.

Walkout of Utah Copper Company Railroaders

A walkout, to force a settlement of a dispute as to retirement benefits and recognition of employment as railroad workers, was staged by 100 members of the Order of Railway Conductors at the plant of the Utah Copper Company at Bingham Canyon, Utah, on July 7. The walkout threatened to shut down completely operations of the company which employs about 6,000 men in its open pit mine at Bingham Canyon and in its mills at Arthur and Magna.

The men walked out over demands that the company recognize that they are employees of the Bingham & Garfield and not the copper company, which owns it. The union also contends that the company's refusal to classify the men as railroad employees caused them to lose the benefits of the Railroad Retirement Act. The company disputes the union's claim, pointing out that a number of years ago the courts ruled in favor of train and

enginemen in the Utah Copper Company ore delivery department who contended that they were entitled to retirement benefits under the Retirement Act.

Banker Scores I. C. C.'s Views on Competitive Bidding

A letter sharply critical of the report of the Interstate Commerce Commission's legislative committee on the bill (S. 874) to require competitive bidding on railroad security issues, introduced by Senator Shipstead, Republican of Minnesota, has been made public by Otis & Company, a Cleveland, Ohio, banking firm, which addressed the letter to Chairman Wheeler of the Senate Interstate Commerce Committee.

The report in question opposed com-

pulsory competitive bidding in general, as indicated in *Railway Age* of June 5, page 1150. The banking firm's letter termed it "incomplete, inaccurate and, in many respects, misleading." The I. C. C. committee, it went on to say, "has either divorced itself from reality or has been guilty of intentional insincerity in urging that 'there is no need at this time for any legislation requiring the sale of railroad securities at competitive bidding.'"

In inviting the Senate committee to "follow closely" the I. C. C. hearing on the application of the Pennsylvania to sell an issue of Pennsylvania, Ohio & Detroit bonds to Kuhn Loeb & Company, which began July 8, the banking firm's letter alleged that, although the commission's legislative committee "studiously avoids the

Selected Income and Balance-Sheet Items of Class I Steam Railways

Compiled from 132 reports (Form IBS) representing 136 steam railways by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission

(Switching and Terminal Companies Not Included)

Income Items	All Class I Railways			
	For the month of April		For the four months of	
	1943	1942	1943	1942
1. Net railway operating income.....	\$127,059,362	\$101,596,297	\$468,119,129	\$323,278,276
2. Other income	12,438,954	11,681,581	48,371,219	46,913,483
3. Total income	139,498,316	113,277,878	516,490,348	370,191,759
4. Miscellaneous deductions from income..	2,676,434	2,601,047	9,477,606	9,897,570
5. Income available for fixed charges..	136,821,882	110,676,831	507,012,742	360,294,189
6. Fixed charges:				
6-01. Rent for leased roads and equip-				
ment	15,131,525	13,722,032	58,955,747	54,605,782
6-02. Interest deductions ¹	35,950,288	37,030,693	145,610,247	148,143,296
6-03. Other deductions	120,130	113,850	499,624	469,927
6-04. Total fixed charges.....	51,201,943	50,866,575	205,065,618	203,219,005
7. Income after fixed charges.....	85,619,939	59,810,256	301,947,124	157,075,184
8. Contingent charges	2,718,685	2,333,605	9,596,151	9,027,727
9. Net income	82,901,254	57,476,651	292,350,973	148,047,457
10. Depreciation (Way and structures and				
Equipment)	26,627,524	20,744,317	106,128,362	77,029,654
11. Amortization of defense projects.....	10,318,632	6,293,227	40,665,619	19,663,447
12. Federal income taxes.....	122,382,770	53,270,024	426,228,750	141,156,516
13. Dividend appropriations:				
13-01. On common stock.....	383,082	270,000	23,254,284	19,522,803
13-02. On preferred stock.....	852,990	778,185	6,378,953	5,933,278
Ratio of income to fixed charges (Item				
5 ÷ 6-04)	2.67	2.18	2.47	1.77
Selected Asset and Liability Items				
20. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)	All Class I Railways		Balance at end of April	
	1943	1942	1943	1942
21. Cash	1,029,649,859	799,887,773		
22. Temporary cash investments	1,159,891,049	135,598,227		
23. Special deposits	156,729,098	155,450,146		
24. Loans and bills receivable	302,228	1,149,446		
25. Traffic and car-service balances—Dr.	39,586,065	37,979,741		
26. Net balance receivable from agents and conductors.....	159,719,039	96,473,189		
27. Miscellaneous accounts receivable	535,613,789	267,246,388		
28. Materials and supplies	519,519,230	528,837,930		
29. Interest and dividends receivable.....	20,625,025	20,122,448		
30. Rents receivable	1,185,568	1,121,418		
31. Other current assets	23,584,014	26,527,924		
32. Total current assets (items 21 to 31).....	3,646,404,964	2,070,394,630		
40. Funded debt maturing within 6 months ²	\$164,253,103	\$93,193,779		
41. Loans and bills payable ³	16,894,607	17,641,533		
42. Traffic and car-service balances—Cr.	129,520,445	74,447,178		
43. Audited accounts and wages payable.....	379,785,852	310,319,848		
44. Miscellaneous accounts payable	82,525,822	52,920,376		
45. Interest matured unpaid	56,728,812	49,440,755		
46. Dividends matured unpaid	2,727,500	2,167,777		
47. Unmatured interest accrued	67,660,389	75,640,487		
48. Unmatured dividends declared	8,213,031	5,445,248		
49. Unmatured rents accrued	27,757,942	26,231,700		
50. Accrued tax liability	1,271,679,019	466,990,745		
51. Other current liabilities	68,781,112	56,086,500		
52. Total current liabilities (items 41 to 51).....	2,112,274,531	1,137,332,147		
53. Analysis of accrued tax liability:				
53-01. U. S. Government taxes	1,145,021,729	353,564,411		
53-02. Other than U. S. Government taxes.....	126,657,290	113,426,334		

¹ Represents accruals, including the amount in default.

² Includes payment of principal of long-term debt (other than long-term debt in default) which will become due within six months after close of month of report.

³ Includes obligation which mature not more than 2 years after date of issue. (Subject to revision.)

realities of railroad finance," two New York banking firms—Morgan Stanley & Company and Kuhn Loeb & Company—"have had an almost complete monopoly on privately negotiated railroad finance" for 50 years, that the two banking houses "work closely together to preserve their monopoly," and that in cases of open competition they "have rarely been known as successful bidders."

The commission, which the Otis & Company letter said "cannot but be aware of all these considerations," was accused of "setting itself up as the defender of Morgan's and Kuhn Loeb's vested interests, regardless of the welfare of the railroads, not to mention the public interest."

The letter went on to recite instances of railroad bond issues sold at competitive bidding in recent years, and to analyze and oppose arguments against that practice contained in the legislative committee report.

No Hearing in Ex Parte 155

The Interstate Commerce Commission has directed that statements and answers to a questionnaire will provide it with sufficient facts for a decision in its Ex Parte 155 proceeding, instituted, as reported in *Railway Age* of June 5, page 1149, to determine whether officers, directors or employees of common carriers owned stock in a freight forwarder in violation of the provisions of Section 411 (c) of the Interstate Commerce Act. A formal hearing is unnecessary under the circumstances, it is pointed out.

Owner-Operator Truck Leasing

The Bureau of Motor Carriers of the Interstate Commerce Commission has issued as information, without the consideration of the commission, a 52-page study in the form of a preliminary statistical report on the leasing of owner-operator equipment, the first statistical analysis by the bureau of one of the several types of leasing practices in the motor carrier field. Information presented in the report includes gross compensation received by the owner-operators and deductions, that is, drivers' wages, taken therefrom.

ODT Appointments

Neil S. Laidlaw, West Coast port supervisor for the Office of Defense Transportation's Division of Railway Transport, has been appointed to the positions of assistant deputy director of the Division of Railway Transport and associate director of the Divisions of Storage and of Coastal and Intercoastal Transport. In these positions he will supervise the movement of freight through all Pacific Coast ports and storage of commodities in the coast states so as to avoid congestion and achieve the most efficient use of the rail, waterway and storage facilities, the ODT states. Mr. Laidlaw, a water transport specialist for more than 25 years, joined the ODT staff in March, 1942. His headquarters will continue to be in San Francisco, Calif.

Richard O. Fischer of Chicago, Ill., has been appointed deputy director of the ODT

Division of Railway Transport to perform "special duties" on the staff of the division's director, V. V. Boatner. Mr. Fischer has been on leave since February, 1942, from his position as general superintendent of transportation of the Illinois Central, and until his present appointment to the ODT staff was chief of the operations branch, rail division, of the Army's Transportation Corps. He entered the service of the Illinois Central in 1905, and since then has been continuously in that road's employ except for a two-year period spent with the United States Railroad Administration during federal control.

May Earnings in Canada

The two principal Canadian railways reported May earnings and expenses as follows:

Canadian Pacific			
May	1943	Increase	
Gross	\$ 24,205,061	\$ 2,682,936	
Expenses	19,891,648	2,603,133	
Operating net	4,313,413	\$ 79,853	
5 Months	\$111,533,314	\$11,744,888	
Expenses	94,751,589	12,736,881	
Operating net	\$ 16,781,725	*\$ 991,993	
*Decrease.			

Canadian National			
May			
Gross	\$ 37,073,000	\$ 7,386,000	
Expenses	28,320,000	6,403,000	
Operating net	\$ 8,753,000	\$ 983,000	
5 Months	\$171,224,000	\$33,598,000	
Expenses	135,657,000	28,104,000	
Operating net	\$ 35,567,000	\$ 5,494,000	

Burlington Seeks to Operate Helicopter Freight Service

The Burlington Transportation Company, which on June 26, filed an application with the Civil Aeronautics Board seeking authority to operate helicopter passenger service in 13 western states, as reported in the *Railway Age* of July 3, filed another application with that board on July 1, seeking permission to operate helicopter-type aircraft in freight service over 12 routes in Illinois, Iowa, Nebraska, Colorado, Wyoming, Montana and Missouri. The application states the company has been assured the aircraft needed for the proposed operations will be available after the war ends, and it plans to use its existing truck terminals and facilities and trained transportation personnel, supplemented by such additional facilities and personnel as may prove necessary.

The company, which now operates over approximately 5,500 miles of motor truck routes on highways paralleling the proposed helicopter operations, proposes to offer the following types of transportation service: Through coordinated highway-air service; through coordinated air-highway-rail service; through coordinated air-rail service; interline service with other certificated air carriers, and local air service.

The twelve proposed air freight routes are described as follows:

Chicago to Omaha, Neb., via Aurora, Ill., Mendota, Princeton, Kewanee, Galva, Galesburg, Monmouth, Burlington, Iowa, Mt. Pleasant, Fairfield, Ottumwa, Albia, Chariton, Osceola, Creston, Corning and Red Oak; Omaha to Denver, Colo., via Lincoln, Neb., Fairmont, Hastings, Holdrege, McCook, Wray, Colo., Otis, Akron and Brush;

Denver to Billings, Mont., via Greeley, Neb., Cheyenne, Wyo., Douglas, Casper, Thermopolis, Basin, Greybull and Cody; Casper to Billings via Sheridan, Wyo., and Hardin, Mont.; Galesburg, Ill., to Kansas City, Mo., via Bushnell, Ill., Macomb, Quincy, Brookfield, Chillicothe, Mo., and Cameron; Mendota, Ill., to Mt. Pleasant, Iowa, via Rock Island, Ill.; Kewanee, Ill., to Peoria; Peoria to Quincy, Ill., via Canton; Des Moines, Iowa, to Kansas City via Osceola, Iowa, and Cameron; Omaha to Kansas City via Shenandoah, Iowa, Clarinda and St. Joseph, Mo.; Rock Island to St. Louis, Mo., via Galesburg, Ill., Rushville, Beardstown, Jacksonville, Alton and East St. Louis; and Rock Island to St. Louis via Burlington, Iowa, Ft. Madison, Keokuk, Quincy, Ill., and Hannibal, Mo.

Freight Car Loading

Because carloading reports were delayed by the Fourth of July holiday the Association of American Railroads had not announced the total for the week ended July 3 when this issue went to press.

Loading of revenue freight for the week ended June 26 totaled 760,844 cars and the summary for that week, compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loadings

For the Week Ended Saturday, June 26			
Districts	1943	1942	1941
Eastern	143,319	158,064	190,810
Allegheny	155,764	186,239	203,641
Poconchos	30,013	55,858	60,166
Southern	105,705	121,969	122,928
Northwestern	132,439	140,387	142,470
Central Western	122,492	123,452	130,425
Southwestern	71,112	67,449	58,164
Total Western Districts	326,043	331,288	331,059
Total All Roads	760,844	853,418	908,604
Commodities			
Grain and grain products	55,610	44,066	52,931
Live stock	11,521	10,676	9,470
Coal	68,470	166,213	170,884
Coke	10,952	14,039	14,023
Forest products	44,856	52,351	46,404
Ore	81,101	88,167	73,025
Merchandise l.c.l.	98,374	92,209	159,300
Miscellaneous	389,960	385,697	382,567
June 26	760,844	853,418	908,604
June 19	868,241	844,913	885,539
June 12	854,486	832,635	862,974
June 5	667,575	854,689	852,940
May 25	852,518	795,621	801,783

Cumulative Total
26 Weeks20,097,022 21,063,401 19,850,732

IN CANADA.—Car loadings for the week ended June 26 totaled 67,734 as compared with 68,120 for the previous week and 67,336 for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
June 26, 1943	67,734	40,340
June 19, 1943	68,120	40,356
June 12, 1943	69,255	36,406
June 27, 1942	67,336	35,804
Cumulative Totals for Canada:		
June 26, 1943	1,632,014	960,414
June 27, 1942	1,639,199	838,522
June 28, 1941	1,493,723	758,976

ODT Gets a New Job

As the result of a "mutual understanding" as to the function of the various government agencies in the petroleum supply and rationing field and as to inter-agency relationships, an overall policy and procedure for the handling of petroleum supply and distribution problems has been developed by the War Production Board, the Office of Price Administration, the Petroleum Administrator for War, and the Office of Defense Transportation, WPB Chairman Donald M. Nelson announced July 2. As a result of the arrangement,

the ODT, in addition to its transportation responsibilities and its functions of presenting to Petroleum Administrator Ickes estimates of petroleum requirements for all forms of transportation, also will determine the distribution of petroleum products among all classes of transport, including private automobiles, within the total amount allotted by the PAW.

Maintenance of the petroleum supply and its distribution will continue to be the responsibility of Mr. Ickes, and the OPA will continue to handle rationing operations, Mr. Nelson indicated, while the WPB will determine the relative essentiality and priority of the various industrial and civilian uses of all petroleum products, including gasoline. An advisory Petroleum Rationing Policy Committee has been set up to provide a channel for review of allocation and rationing questions, and each agency involved in the petroleum supply problem will be represented on this committee, it was said.

Truck Joint Action Plan

A joint action plan submitted by the Frisco Transportation Company, a subsidiary of the St. Louis-San Francisco, and Powell Brothers Truck Lines for the consolidation of certain operations between Kansas City, Mo., and Springfield has been approved by the Office of Defense Transportation. It was pointed out that this agreement will result in full load movements in both directions by the Frisco line, while the Powell line will shift equipment into needed service elsewhere, resulting in an annual saving of about 123,000 truck miles on the route in question.

A. A. R. Car Service Rule Change

A revision of Car Service Rule 14, effective July 1, has shifted the responsibility for transfer or rearrangement of lading due to certain conditions from the delivering line to the originating road haul carrier. This change applies where cars are overloaded, where the dimensions of the load on open cars exceeds published clearances for the routing, where closed cars having an inside length over 50 ft. 6 in. will not pass such published clearances, and where cars cannot pass third-rail clearances approved by the Association of American Railroads.

No Wheat Car Crisis Expected

At Kansas City, which is the focal point of the wheat movement, 1,010 cars of grain were unloaded during the holiday period of July 4-5, while 2,410 cars were on hand as of 6 p.m. on July 6. At Wichita, where shortage of labor was expected to interfere with the unloading of cars at elevators, a much better showing is being made than was anticipated. For example, the Santa Fe had 223 cars of wheat on hand at that terminal as of 6 p.m., July 6, while 92 cars had been unloaded that day.

The committees of grain trade executives in charge of the permit system are functioning most efficiently and, barring unforeseen complications, there is no prospect of any undue congestion. Other factors that have contributed materially to

this result are the fast grain inspection, the close watch kept on the movement by the railways themselves, the Car Service division, A. A. R., representatives of the I. C. C. and of the national grain car conservation committee. Many representatives of the Department of Agriculture are also in the field and their efforts have been quite successful in having the growers store the grain on the farm instead of bringing it in to the country elevator and dumping it on the ground if no storage space or empty cars were available.

The week of July 4 represents the most crucial of the entire winter wheat harvest. However, the railways and the elevators entered upon this period in comparatively good shape and it appears practically certain that the efficient advance organization and the close co-operation between the railways and all the other agencies concerned will be successful in avoiding any transportation crisis.

Bureau of Valuation To Have New Director

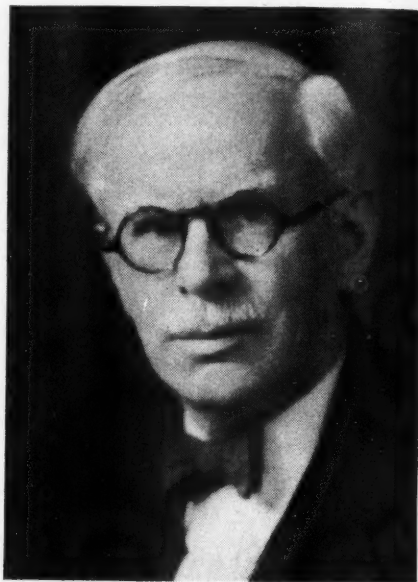
Appointment of Robert A. Lacey as director of the Bureau of Valuation of the Interstate Commerce Commission, effective September 1, in place of Ernest I. Lewis, who has retired, was announced in *Railway Age* of June 26, page 1275. Until his new appointment becomes effective, Mr. Lacey will be in charge of the bureau as acting director, as Mr. Lewis is on leave of absence pending his retirement from service.

Mr. Lacey was born in Bolton, Miss. He entered the service of the commission in 1914, and became a pioneer in the work of establishing basic valuations of railroads, serving, in turn, as assistant field leader, field leader and later in charge of valuation accounting in the southern district, with headquarters at Chattanooga, Tenn. In these positions he participated in formulating for all roads in the district the physical and corporate history; statistics on securities issued, assumed, and retired, including banking arrangements;

results of corporate operations; and data on investment and original costs of physical properties.

After basic field work in this task was completed, Mr. Lacey was transferred to the commission's Washington, D. C., office to prepare and defend in commission hearings the valuation accounting reports on roads in the southern district. In 1926, he was made assistant in charge of completing valuation accounting reports for railroads of the whole country, and later he participated in completing valuation reports on oil pipelines.

Since 1933, Mr. Lacey has been, until



Harris & Ewing

Ernest I. Lewis

his recent promotion, head auditor of property changes, in charge of auditing property changes of railroads and pipelines since the completion of the basic valuation studies. In this connection he has taken part in the development of the system under which the commission requires railroads to set up physical property depreciation accounts. In the course of the formation of the plan for the reorganization of the Chicago Great Western he was called upon to aid in the development of the method of opening new books after reorganization, mergers, and consolidations.

Mr. Lewis' retirement came after his completion of a quarter of a century in the service of state and federal regulatory commissions. He was born in Danville, Ind., February 7, 1873, and following a public school education became a reporter and special writer for newspapers and magazines, specializing in the field of transportation and public utilities, in which his experience was recognized in 1917 in his appointment as chairman of the Indiana Public Service Commission.

In 1921 Mr. Lewis, a Republican, was appointed to membership on the Interstate Commerce Commission by President Harding, and the next year the commission's valuation work was put under his direction. In 1925 President Coolidge reappointed him to the commission, and in 1929 he served as chairman. When the Senate failed to confirm his reappointment



Harris & Ewing

Robert A. Lacey

at the close of President Hoover's administration, Mr. Lewis in January, 1933, was appointed by the commission to the position from which he is now retiring. During his service in charge of the bureau the basic valuation of railroads and pipelines has been completed and maintained on a current basis, this constituting what has been described as "the greatest valuation of public service property ever undertaken."

Mr. Lewis is chairman of the Committee on Valuation of the National Association of Railroad and Utilities Commissioners and was author of its valuation reports. In 1942 he was appointed by President Roosevelt a member of the federal Anthracite Coal Commission, of which Representative Boland was chairman.

Congress Turns Down Railroad Flood Loans

Authorization to the Reconstruction Finance Corporation to loan to railroads for flood relief purposes \$25,000,000 at not more than 3 per cent interest, to be amortized over a period of 40 years, which was contained in a bill (S. 1134) passed by the Senate June 29, as reported in *Railway Age* of July 3, page 32, was rejected by the House and was omitted from the bill in its final form, as passed by both houses of Congress and sent to the President. It was explained on the floor of both houses that the R. F. C. already has authority to make such loans, though it has not been its custom to limit interest charges to the figure proposed in the Senate bill.

Olds Credits Turn in War to Production

The result of the efforts of the personnel who direct and man the country's mines, factories and transportation systems can be found in the highly favorable change in the course of the war in recent months, according to Irving S. Olds, chairman of the board of the United States Steel Corporation, at a preview luncheon of the corporation's motion picture, *To Each Other*, held at Chicago on July 1. "Despite hampering obstacles of one kind or another," he said, "our industrial organization during the past three years has performed a wonderful job of production. American business has demonstrated a willingness, a determination and an ability fully to cooperate with the government toward the attainment of our common objective, the complete defeat of the Axis powers."

"Our fine record of production has been accomplished because we had in the United States in June, 1940, a virile and effective industrial organization built up over many years under a system of free private enterprise—a system which has permitted the development of our national resources, the establishment of modern productive facilities, the training of skilled operating forces, and the attainment of a high standard of living. American business has truly come into its own and belied those critics who not long ago questioned its virility and effectiveness."

"All of us who are connected with the steel industry are justly proud of that in-

dustry's war contribution. Last year was one of record steel production—more than 86,000,000 tons of steel ingots were produced in the United States in 1942. The Steel Corporation's share in that total was 30,000,000 tons, perhaps an amount in excess of the combined steel output of Germany and her allies during that year. For more than two years the corporation's production has averaged in excess of 100 per cent of its rated capacity for finished steel products. Its facilities have been materially revamped and extended so as to bring forth in increasing amounts various steel products needed by our vast war machine. This was an undertaking involving the eventual expenditure of more than \$700,000,000, a large part being financed by the government."

At a press conference following the luncheon, Mr. Olds said that a loss of 37,500 tons in steel ingot production was experienced by the corporation and its subsidiaries during the week ending July 1 as a result of the coal strike. Coal mining stoppages a few weeks earlier cost the corporation 45,000 tons.

The corporation is in a "comfortable position", so far as iron ore is concerned, he said. Stock piles sufficient to carry operations through to May 1, 1944, can be built up, he explained.

Eastman's T. P. & W. Featherbed Statement Available

The Office of Defense Transportation has made available a statement by Director Joseph B. Eastman, under the title "Featherbed Rules, Railroad Manpower, and the T. P. & W.," discussing the effect of featherbed rules on the utilization of railroad manpower, with special reference to the application of such rules to the T. P. & W. under federal operation. The 11-page publication is based on testimony given by Mr. Eastman before the House Military Affairs Committee on May 7, which was reported in *Railway Age* of May 15, page 959. Copies are available from the ODT Information Office, Washington, D. C.

\$377 Million Net Income in 5 Mos.

(Continued from page 68)

029,547, an increase of 18.3 per cent. The Eastern district for May alone had an estimated net income of \$36,100,000 compared with \$29,095,359 in May, 1942. Net railway operating income amounted to \$53,223,139 compared with \$46,876,529.

In the Southern region the five months estimated net income was \$67,000,000 compared with \$45,144,745 in the same period last year. The net railway operating income was \$95,852,371 compared with \$73,623,497. Gross in the Southern region in the five months totaled \$543,802,980, an increase of 43.4 per cent compared with the same period of 1942, while operating expenses totaled \$301,411,230, an increase of 25.4 per cent. In the Southern region for May the estimated net income was \$13,200,000 compared with \$12,408,399 in May, 1942. Net railway operating income

amounted to \$19,182,199 compared with \$18,462,144.

Class I roads in the Western district in the five months had an estimated net income of \$160,400,000 compared with \$71,749,991 in the same period last year. Their net railway operating income of \$264,184,059 compared with \$176,909,573 in the same period in 1942.

Operating revenues in the Western district in the five months totaled \$1,452,431,182, an increase of 45.8 per cent compared with the same period in 1942, while operating expenses totaled \$847,173,095, an increase of 26.9 per cent. For May their estimated net income of \$35,800,000 compared with \$22,164,525 in May, 1942. Net railway operating income amounted to \$55,763,682 compared with \$44,328,889 in May, 1942.

CLASS I RAILROADS—UNITED STATES Month of May

	1943	1942
Total operating revenues	\$ 759,330,727	\$ 601,063,798
Total operating expenses	454,361,704	375,447,890
Operating ratio—per cent	59.84	62.46
Taxes	160,595,803	100,188,730
Net railway operating income (Earnings before charges)	128,169,020	109,667,562
Net income, after charges (estimated)	85,100,000	63,668,283

Five Months Ended May 31

Total operating revenues	3,599,292,997	2,657,071,611
Total operating expenses	2,178,613,872	1,778,790,428
Operating ratio—per cent	60.53	66.95
Taxes	746,121,013	377,791,527
Net railway operating income (Earnings before charges)	596,288,148	432,945,839
Net income, after charges (estimated)	377,600,000	211,538,528

I. C. C. Service Orders

Service orders of the Interstate Commerce Commission requiring several changes in the handling of potatoes have recently been issued. The provisions of Service Order No. 127, requiring a War Food Administration permit before railroads could move potatoes from points in certain states, have been lifted as far as shipments from North Carolina and Virginia points are concerned by Service Order 127-C, and as far as points in Maine are concerned by Service Order 119-A. The change was effective in Maine July 3, and in the other states named July 7.

Amendment No. 2 to Service Order No. 123, effective July 5, set aside the prohibition of reicing in transit applied by that order to shipments of potatoes from points in Arizona and California. Shipments from other states were not freed from the provisions of the original order and its previous amendment.

Service Order No. 134, effective July 2 until further order of the commission, suspended tariff provisions permitting shipments of potatoes, except sweet potatoes, originating in states south of the Potomac River or in Delaware or the Eastern Shore of Maryland to be held for diversion or reconsignment at Greenwich, Philadelphia, Pa., or at points in Delaware or the Eastern Shore of Maryland.

Also effective July 3 was the commission's Service Order No. 125-A, setting aside its Service Order No. 125, which

had permitted roads affected by the Mississippi valley floods in May to reroute traffic into or across the area affected by the floods without regard to shipper's routing.

Supplemental Fare into New York Approved

The practice of the Pennsylvania of charging a supplemental fare of 15 cents, or selling multiple-trip tickets to cover the same service at a smaller charge, to commuters from certain points in New Jersey who travel to or from Pennsylvania Station, New York, has been upheld by the Interstate Commerce Commission as not unreasonable or otherwise unlawful in a report by Commissioner Johnson. The decision grew out of a complaint by John E. Donnelly, who alleged that the road's practice of requiring commuters from certain points to pay such supplemental fares while not requiring them from other points constituted discrimination.

In his report, Commissioner Johnson pointed out that the aggregate fare, including the supplemental charge, was relatively less from Long Branch, N. J., the point upon which the complaint was based, than from main line points where the supplemental charge was not applied. While the supplemental fares and the commutation fares to the Pennsylvania's New York ferry stations and the New York stations of the Hudson & Manhattan are published separately, they are components of the fares to and from Pennsylvania Station, the commissioner found, and are not an excise or tax, as charged in the complaint. The report also pointed out that use of Pennsylvania Station by commuters in large numbers would interfere with its use for the through traffic for which it was built, and suggested that elimination of the supplemental fare might bring about such a condition. The decision was in the commission's No. 28735 proceedings.

Carriers Ask Dismissal of Montgomery Ward Suit

A motion to dismiss or stay the suit of Montgomery Ward and Company, which seeks damages from certain railroads as a result of a strike in 1941, has been filed by defendant railroads in the District Court at San Francisco, Calif. A civil suit, seeking \$2,026,544 damages from three railroads and 15 trucking and express companies that allegedly failed to provide service during a strike in 1940-41 was filed by the Ward company on December 3, and in its complaint the company contended that all the defendants were obligated by their published tariff to perform transportation services as common carriers to and from Oakland, which services include the transport of property to and from, the making of store deliveries, and the pick-up of property at business establishments in the city, including the establishment of the plaintiff.

A brief, filed by the Western Pacific; the Atchison, Topeka & Santa Fe; the Southern Pacific and Railway Express Agency, Inc., asserts that administrative questions are involved that must first be resolved by the Interstate Commerce Commission. "The major point raised by the motion to dismiss," the brief states, "is

whether a complaint raising such questions may be maintained in court in the absence of preliminary adjudication by the Interstate Commerce Commission, or whether this court is without jurisdiction until resort has been had to the commission and the questions have been adjudicated before that tribunal."

It points out that the Interstate Commerce Act sets up a system for the regulation of common carriers, saves the remedies existing at common law and provides for actions by persons damaged by violation of the statute to be brought either before the commission or in any district court. "The question arises, however," the brief continues, "whether Congress intended to afford an injured party the absolute right of election to proceed in court instead of before the commission in all cases, even where questions committed by the statute to the administrative discretion of the commission are concerned."

Failure to furnish transportation because of the existence of a labor controversy and the establishment and maintenance of a picket line as a consequence constitutes a "practice," the brief contends, and the reasonableness of such practice presents an administrative question. The question of whether service is adequate or inadequate is likewise an administrative question, the brief states, and one within exclusive preliminary jurisdiction of the I. C. C.

The right of a shipper to transportation service is not absolute, it is asserted, "but is subject to reasonable limitations and conditions. The carrier is not required to furnish service except upon reasonable demand and the reasonableness of the demand must be judged by a consideration of surrounding circumstances and conditions. The duty to carry and deliver promptly is not absolute; the only requirement is that due diligence must be observed."

Representation of Employees

As the result of an election conducted under the procedure of the National Mediation Board, the American Federation of Railroad Workers has lost to the United Steelworkers of America, C. I. O., by a vote of 36 to 27 the right to represent hourly rated clerks of the Monongahela Connecting. Station, tower and telegraph employees of the Pennsylvania-Reading Seashore Lines have selected the Order of Railroad Telegraphers as their representative in place of a committee.

The right of the Order of Railway Conductors to represent road conductors of the Burlington-Rock Island, which was challenged by the Brotherhood of Railroad Trainmen, was upheld by a vote of 16 to 9. Patrolmen, including special officers, train-riders and guards in the police department of the Atchison, Topeka & Santa Fe, not previously represented by any organization, voted to be represented by the National Council of Railway Patrolmen's Unions, A. F. of L.

By a vote of 136 to 131 the Joint Council Dining Car Employees, Local 351, of the Hotel and Restaurant Employees' International Alliance, A. F. of L., retained the right to represent the dining car cooks, waiters, waiters in charge, coach waiters,

porter-waiters, waiter-porters, lounge and parlor car porters, cocktail lounge porters and coach cafe cooks and waiters of the Chicago, Burlington & Quincy, which had been challenged by the United Transport Service Employees of America, C. I. O.

Abandonments

BOSTON & MAINE.—Division 4 of the Interstate Commerce Commission has authorized this road to abandon a portion of a branch from Central Massachusetts Junction, Mass., to Maynard, 4.5 miles.

CHICAGO, ATTICA & SOUTHERN.—Division 4 of the Interstate Commerce Commission has authorized this road to abandon segments of its line from State Line Junction, Ind., to Morocco, 9.7 miles, and from Percy Junction, Ind., to LaCrosse, 46.3 miles, and also to abandon operation under trackage rights over the Pere Marquette from LaCrosse to Wellsboro, 15 miles. Pending a hearing, action has been deferred on the road's application for authority to abandon also the line from Veedersburg, Ind., to West Melcher, 23.9 miles.

CHICAGO & NORTH WESTERN.—Division 4 of the Interstate Commerce Commission has authorized this road to abandon a line from a point near Felch, Mich., to the end of the line, 1.3 miles.

CHICAGO & NORTH WESTERN.—This road has applied to the Interstate Commerce Commission for authority to abandon its branch line from Blunt, S. D., to Onida, 14.4 miles.

CHICAGO & NORTH WESTERN.—Division 4 of the Interstate Commerce Commission has denied this road's application for authority to abandon a branch from a point near New Ulm, Minn., to Kasota, 30.87 miles, without prejudice to a renewal of the application after the end of the year 1944.

CHICAGO, ST. PAUL, MINNEAPOLIS & OMAHA.—Division 4 of the Interstate Commerce Commission has authorized this road to abandon its line from Spring Valley, Wis., to Elmwood, 7.19 miles.

MANISTEE & NORTHEASTERN.—This road has applied to the Interstate Commerce Commission for authority to abandon a segment of a branch from Cedar City, Mich., to Provemont, 10.7 miles.

MISSOURI PACIFIC.—This road has applied to the Interstate Commerce Commission for authority to abandon two lines, one from Sedalia, Mo., to Warsaw, 42 miles, and one from South Junction, Ill., to Thebes, 1.43 miles.

NEZPERCE & IDAHO.—This road has applied to the Interstate Commerce Commission for authority to abandon its line from Nezperce, Ida., to Craigmont, 13.8 miles.

Equipment and Supplies

LOCOMOTIVES

The WHEELING & LAKE ERIE is reported to have placed an order for six steam switching locomotives with the American Locomotive Company, subject to approval of the War Production Board.

The NORFOLK & WESTERN has been authorized by the War Production Board to build 10 steam freight locomotives of 2-6-6-4 wheel arrangement with 22,000 gal. tenders in the railroad's own shops at Roanoke, Va. These are in addition to 15 locomotives of the same type ordered in April, 1942, deliveries of which are now under way and are scheduled to be completed in September. Deliveries of the additional 10 engines are reported to be scheduled for the first six months of 1944.

FREIGHT CARS

The ALTON has ordered 500 composite hopper cars of 50 tons' capacity from the American Car & Foundry Co.

The MISSOURI PACIFIC is rebuilding 540 70-ton hopper cars in its DeSota shops, of which 207 were completed in April and May. When these cars are finished, work on the rebuilding of 200 50-ton gondola cars will be started. The construction of 100 50-ton flat cars for the Missouri Pacific has been started by the American Car & Foundry Co.

IRON AND STEEL

The DENVER & RIO GRANDE WESTERN has been authorized by the Federal District Court at Denver, Colo., to spend \$2,900,000 for improvements, of which a large portion will be for rail replacements.

CHICAGO, ROCK ISLAND & PACIFIC.—The federal district court at Chicago has authorized trustees of this road to purchase 60,000 tons of rails and fastenings at a cost of \$2,400,000. According to the petition for the authorization the rails are necessary to replace equipment worn by heavy wartime traffic in 1942 and 1943 and to anticipate wear in 1944. The rails were needed earlier, the petition averred, but could not be obtained.

SIGNALING

THE RICHMOND, FREDERICKSBURG & POTOMAC has placed an order with the Union Switch & Signal Company for a model 31 electro-pneumatic car retarder for installation of its hump at Northbound Potomac yard, involving a total of 212 rail-feet of brake shoe length.

THE UNION PACIFIC has placed an order with the Union Switch & Signal Company covering materials for the installation of centralized traffic control on its Oregon division between La Grande, Ore., and Rieth, 78 miles of single track line traversing the Blue Mountains. The C. T. C.

machine for controlling this entire territory will be located at La Grande. Style M-22-A dual control low-voltage switch movements and style SL-6 switch locks will be used, with searchlight type high or dwarf signals at controlled locations, and intermediate signals of the P-5 color-light type. The order includes complete telephone equipment for controlled head block and switch lock locations, with telephone communication facilities superimposed on the code line, and with motor car indicators of the semaphore type to be used throughout the territory. The field installation work will be done by the railroad company's regular signal construction forces.

Supply Trade

Joseph L. Mullin, works manager at the New Castle, Del. plant of the American Manganese Steel Division of the American Brake Shoe Company, has been appointed general superintendent of foundries, with offices at Chicago. W. F. Kelly, plant superintendent at New Castle, has been named works manager to succeed Mr. Mullin.

OBITUARY

Carl T. Mead, resident manager of the Standard Stoker Company with headquarters at Montreal, Canada, died on June 21. He was 49 years of age.

Charles Packard, field sales representative of the Simmons-Boardman Publishing Corporation, died suddenly at St. Paul, Minn., on July 2. He was 67 years of age. Mr. Packard was widely known among railroad and railroad supply men in the middle west. He had been associated with the Simmons-Boardman circulation department since 1926, having been formerly with the Railway Review, which was merged into the *Railway Age* at that time.

Rowland R. Seward, eastern sales manager of the Rail Joint Company, Inc., died suddenly at his home at Flushing,



Rowland R. Seward

N. Y., on July 3. Mr. Seward was born on May 28, 1883, at New York, and had been connected with the Rail Joint Company since September 15, 1908. He had served as eastern sales manager, with headquarters at New York, since January, 1936.

Financial

Five Railroad Securities Added to New York State List

Five railroad bond issues with a par value of \$12,212,000 have been added to the list of securities considered by the New York State Banking Department to be eligible for purchases by savings banks of the state and 23 issues with a par value of \$67,852,000 have been removed. The additions to the legal list comprise a \$5,200,000 equipment trust issue of the Chesapeake & Ohio; a \$1,600,000 issue of Philadelphia, Newton & New York first 3 per cent bonds of 1967; \$3,900,000 of Bangor & Aroostook collateral trust 4 per cent bonds of 1951; \$832,000 of Kansas City Southern equipment trust certificates and \$680,000 of Pere Marquette equipment trust certificates.

The removals of rail issues this year are entirely due to maturities or calls for redemption. The principal removals include \$21,057,000 of New York Central 3¾ per cent bonds of 1946 and \$11,413,000 of Atlantic Coast Line 5 per cent bonds of 1945, both of which issues were called for redemption before the maturity date. Substantial reductions in the outstanding issues of several other railroads have resulted in the total par value of railroad bonds on the department's legal list decreasing by about \$200,000,000 since the 1942 list was reported.

BURLINGTON-ROCK ISLAND.—*Galveston Terminal Lease.*—This road has applied to the Interstate Commerce Commission for authority to reduce from \$40,000 to \$2,500 its cash rental payment made annually, in addition to taxes and other costs, under its agreement to lease the property of the Galveston Terminal, in view of the purchase and retirement by the parent roads, the Chicago, Rock Island & Pacific and the Colorado & Southern, of the terminal's outstanding bonds, interest charges on which were covered by the rental heretofore paid.

CANADIAN PACIFIC.—*Bond Redemption.*—The Canadian Pacific will call for redemption on September 1, its \$19,000,000 of outstanding 20-year, 4½ per cent collateral trust bonds due September 1, 1946, at 100½. The major portion of funds necessary to meet the redemption has been provided by the issuance of \$18,000,000 of 3 per cent equipment trust certificates, dated April 1, 1943, and sold privately in the United States. The new issue matures in the amount of \$900,000 each six months for 10 years.

CENTRAL OF GEORGIA.—*Promissory Notes.*—This road has applied to the Interstate Commerce Commission for authority to issue 10 promissory notes in the total amount of \$127,741 in evidence of the unpaid balance on certain conditional sales contracts for equipment.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—*Reorganization.*—For the sole purpose of considering two matters in respect to this road's reorganization plan which

were referred back to the Interstate Commerce Commission by the federal district court, that is, which mortgages have liens on the so-called pieces of lines east and what additional compensation, if any, should be provided for certain bondholders whose senior rights are affected by the plan of reorganization, the commission has ordered a public hearing to begin in Washington, D. C., July 20 before Commissioner Porter.

DELAWARE, LACKAWANNA & WESTERN.—*Lease of Ferry.*—This company has applied to the Interstate Commerce Commission for approval of a lease agreement under which it would continue to operate the property of its wholly owned subsidiary, the Hoboken Ferry Company.

DELAWARE, LACKAWANNA & WESTERN.—*Morris & Essex Merger Deferred.*—J. H. T. Martin, president of the Morris & Essex, told stockholders at the annual meeting that the railroad had not arrived at a suitable agreement with the Delaware, Lackawanna & Western over a merger plan that could be reasonably offered to the stockholders. The M. & E. is leased by the D. L. & W. and has been negotiating with the lessor company to exchange its \$15,000,000 of outstanding capital stock for bonds in order to eliminate the question of who is responsible for federal income taxes, now amounting to about \$2,800,000, on rentals paid to M. & E. stockholders. According to Mr. Martin, the Delaware, Lackawanna & Western made a tentative offer of \$10,000,000 in second mortgage and \$5,000,000 in third mortgage M. & E. bonds for the capital stock, at a proposed interest rate of 3 per cent and with a possible additional 2 per cent of contingent interest.

DULUTH, SOUTH SHORE & ATLANTIC.—*New Trustee.*—Division 4 of the Interstate Commerce Commission has ratified the appointment of P. L. Solether as co-trustee of this road in place of Sigurd Ueland, resigned.

NEW YORK CENTRAL.—*New York & Harlem Bonds.*—This company and the New York & Harlem, lessor, which it controls through ownership of a majority of the capital stock, have applied to the Interstate Commerce Commission for authority for the latter to issue, and the former to assume liability for, \$7,820,000 of New York & Harlem 4 per cent mortgage bonds to mature in 2043. The issue would consist to \$470,000 of Series A bonds and \$7,350,000 of Series B.

It is proposed to deliver the new bonds when issued to the New York Central in consideration of a cash payment of \$2,500,000 and settlement of advances made by the parent company and indebtedness of the N. Y. & H. thereto. The \$2,500,000 is to be set up as a fund for the retirement at or before maturity of \$12,000,000 of N. Y. & H. 3½ per cent first mortgage bonds due in 2000.

Upon receipt of the new bonds, the N. Y. C. proposes to exchange them for all or a substantial part of the outstanding minority stock of the N. Y. & H., the

exchange to be effected at the rate of \$125 of bonds for each share of stock. The Series A bonds are to be exchanged for preferred stock and the Series B for common stock.

At the same time the two companies applied to the I. C. C. for approval of an amended lease agreement to give effect to the proposed transaction.

NEW YORK CENTRAL.—*New York & Harlem Offer.*—Stockholders of the New York & Harlem will vote, August 5, on an offer by the New York Central looking to the issue of \$7,820,000 of new 100-year non-callable 4 per cent mortgage bonds by the New York & Harlem, the purchase and guarantee of the new bonds by the New York Central, and the delivery of the requisite amount of the new bonds to minority stockholders of the N. Y. & H. in exchange for their holdings of N. Y. & H. preferred and common stock on the basis of \$125, principal amount, of new bonds for each share of \$50 par value minority stock. Under terms of the lease between the two railroads, the New York Central has paid federal income and excess profits taxes of the Harlem, but an action by the Central now pending in the Supreme Court of New York asks that such taxes be deducted from dividend rental payments. The exchange proposal is designed to eliminate the question of who is liable for income taxes and the annual interest on the new bonds would yield the same annual return that Harlem stockholders have received heretofore without risk of such return being lessened by an adverse decision of the court. The New York Central owns 23,119 of the 26,879 shares of outstanding preferred stock of the Harlem and 114,321 of the 173,121 shares of common stock outstanding.

The new bonds would be secured by a new closed mortgage, dated July 1, 1943, upon the properties of the Harlem now covered by its existing mortgage, securing \$12,000,000, principal amount, of 3½ per cent first mortgage bonds due May 1, 2000. Out of the proceeds of the \$7,820,000 in cash received by the New York & Harlem, the railroad would establish a \$2,500,000 fund to provide for the retirement of the first mortgage bonds at maturity, the Central agreeing to pay any additional amount necessary to effect such retirement. The remaining \$5,320,000 of the purchase price would be paid back to the Central in satisfaction of (1) advances made to the Harlem in connection with the operation of its former street surface railway lines (amounting, with simple annual interest at 6 per cent to May 31, 1943, to \$6,240,932); (2) all claims of the Central for federal income taxes prior to January 1, 1943 (amounting for the six years, 1937 to 1942, without interest, to \$1,179,382); and (3) advances to be made for the expenses of preparing and recording the mortgage securing the new bonds, etc.

PENNSYLVANIA.—*Bond Issue.*—Acting on a joint petition of Halsey, Stuart & Company and Otis & Company, investment bankers, for leave to intervene in proceedings before the Interstate Commerce Commission arising from the application

of this company's subsidiary, the Pennsylvania, Ohio & Detroit, for authority to issue \$28,483,000 first and refunding mortgage 3¼ per cent bonds, as reported in this column last week, Division 4 of the commission has denied the petition of Halsey, Stuart & Company but has permitted Otis & Company to intervene, since that firm is a Pennsylvania stockholder. In so ordering, however, the division stipulated that no right was granted "to broaden the issues inherent in the application."

ST. LOUIS SOUTHWESTERN.—*Trackage Rights.*—Division 4 of the Interstate Commerce Commission has authorized this road to operate passenger trains under trackage rights over tracks of the Terminal Railroad Association from the Union Station in St. Louis, Mo., crossing the Mississippi River by the MacArthur bridge, to a connection with its line at Valley Junction, Ill., 4.28 miles, in lieu of the existing arrangement under which the Merchants bridge route is used between the station and its line. Substantial savings in time are expected to result from the change in operations.

Average Prices Stocks and Bonds

	July 6	Last week	Last year
Average price of 20 representative railway stocks...	37.90	37.71	25.87
Average price of 20 representative railway bonds...	79.83	79.16	64.17

Dividends Declared

Atchison, Topeka & Santa Fe.—\$1.50, payable September 1 to holders of record July 30.
 Augusta & Savannah.—\$2.50, payable July 1 to holders of record June 26.
 Piedmont & Northern.—50¢, quarterly, payable July 20 to holders of record July 3.
 Pittsburgh, Cincinnati, Chicago & St. Louis.—\$2.50, semi-annually, payable July 20 to holders of record July 10.
 South Western.—\$2.50; extra \$1.50, both payable July 1 to holders of record June 22.
 Stoney Brook.—\$2.50, semi-annually, payable July 6 to holders of record June 30.
 Tennessee Central.—7 Per Cent Convertible Preferred (Accum.) \$3.50, payable June 30 to holders of record June 23.

Construction

CHICAGO, NORTH SHORE & MILWAUKEE.—A program of maintenance and repair, involving an estimated expenditure of \$741,948, has been approved for this road by Federal Judge Michael L. Igoe of Chicago. The work, which involves the use of 2,000 tons of steel, will include track repairs on the main line between Waukegan, Ill., and Carrollville, Wis.; replacement of present 80-lb. rail on the Skokie Valley branch with 100-lb. rail, reconstruction of an old powerhouse at Highwood, Ill., as a car-inspection shop, the repair and upkeep of trestles and catenary steel along the right of way, and about 30 miles of ballasting.

WAR DEPARTMENT.—The U. S. Engineer office, San Francisco, Cal., has awarded a contract, amounting to less than \$50,000, to Fritz Ziebarth, South San Francisco, Cal., for the construction of a railroad spur, platform and ramps in California.

Railway Officers

EXECUTIVE

P. L. Solether has been appointed trustee and counsel of the Duluth, South Shore & Atlantic, and the Mineral Range, with headquarters at Minneapolis, Minn., succeeding **Sigurd Ueland**, who has resigned.

Starr Whitney Fairweather, chief of research and development of the Canadian National, has been appointed vice-president of research and development, with headquarters as before at Montreal, Que. Mr. Fairweather was born on April 30, 1892, at Apohaqui, N. B., and studied engineering at Acadia and McGill universities. He entered railroad service in May, 1916, as assistant engineer on the car ferry terminals to Prince Edward Island, in the Department of Railways and Canals, and in 1917 became assistant engineer on the Quebec Bridge Commis-

sion. In 1918 he became structural engineer in the Department of Railways and Canals, and in 1920 he was appointed office engineer of that department. Mr. Fairweather joined the Bureau of Economics of the Canadian National as assistant to the director in 1923. In 1929 he was promoted to assistant director, and in 1930 he was advanced to director of the Bureau of Economics. Mr. Fairweather became chief of research and development of the Canadian National in 1939, and remained in that capacity until his recent appointment as vice-president of research and development.

Herbert Alexander Enochs, whose appointment as vice-president—personnel, of the Pennsylvania, with headquarters at Philadelphia, Pa., was announced in the *Railway Age* of July 3, was born on September 19, 1874, at Libertyville, Pa. Mr. Enochs entered railroad service in 1895 as a baggageman on the Philadelphia division of the Pennsylvania, and subsequently served as brakeman, through bag-



Herbert A. Enochs

gage master, passenger conductor, inspector in the office of the superintendent of telegraph and examiner of wages and working conditions in the office of the general manager at Philadelphia. In September, 1918, he became superintendent of the labor and wage bureau. He was appointed acting chief of personnel in

addition to his duties as superintendent of the labor and wage bureau, Eastern region, in December, 1931, and in 1932 he became chief of personnel, the position he held at the time of his recent promotion to vice-president—personnel. Mr. Enochs, who is a member of the executive committee of the Bureau of Information of the Eastern Railways, New York, has served for a number of years as chairman of the conference committees representing the railroads in numerous important national and regional negotiations with the railroad labor organizations regarding wages and working conditions.

OPERATING

M. C. Prentiss, engineer of motive power of the New York, Ontario & Western has been promoted to operating assistant, transportation department, with headquarters at Middletown, N. Y.

Charles K. Faye, coordinator of emergency defense of the Western Pacific, with headquarters at San Francisco, Cal., has been appointed assistant to the general manager, a change of title.

A. D. Lancaster, chief dispatcher of the Missouri-Kansas-Texas at Smithville, Tex., has been promoted to trainmaster, with the same headquarters, succeeding **J. G. Schmidt**, who has been assigned to other duties. **W. N. Porche** has been appointed chief dispatcher at Smithville, replacing Mr. Lancaster.

J. A. Lusk, assistant to the general superintendent of transportation of the Atchison, Topeka & Santa Fe, has been promoted to assistant general superintendent of transportation, with headquarters as before at Chicago, succeeding **Weldon T. Richardson**, who has been granted a leave of absence to accept a commission in the Army Transportation Corps. **George A. Alexander**, assistant to the

general superintendent of transportation, succeeds to the duties of Mr. Lusk. **W. H. Teel**, yardmaster of Argentine, Kan., has been promoted to assistant to the general superintendent of transportation, with headquarters at Chicago, succeeding Mr. Alexander, and **K. W. Brintnall**, schedule clerk at Chicago, has been advanced to assistant to the general superintendent of transportation, with the same headquarters, succeeding **C. W. Taylor**, who has been granted a leave of absence to serve with the Office of Defense Transportation.

M. L. McElheny has been appointed general manager of the Central of New Jersey, with headquarters as before at Jersey City, N. J., succeeding **P. S. Lewis**, whose resignation was announced in the *Railway Age* of July 3. The position of general superintendent, formerly held by Mr. McElheny, has been abolished. Mr. McElheny who was born at Jamestown, Pa., attended Jamestown Academy. He entered railroad service in 1897 as an operator of the Pennsylvania, at Newcastle, Pa., subsequently becoming agent and dispatcher. In 1902 he joined the staff of the Baltimore & Ohio as train dispatcher at Pittsburgh, and thereafter



M. L. McElheny

Kalden-Keystone

served that road successively as rules examiner, assistant trainmaster, trainmaster and superintendent. He left the employ of the B. & O. in 1934 to become superintendent of the Central division of the Central of New Jersey, and in 1936 he was promoted to general superintendent, the position he was maintaining at the time of his recent appointment as general manager.

Fred P. Stocker, assistant superintendent of the Eastern district of the Missouri-Kansas-Texas, with headquarters at Boonville, Mo., has been promoted to superintendent of the Northwestern district, with headquarters at Wichita Falls, Tex., succeeding **Willis C. Pruett**, who has been granted a leave of absence for military service, as reported in the *Railway Age* of June 26.

C. H. Phelps, trainmaster of the Southern Pacific at Douglas, Ariz., has been transferred to San Luis Obispo, Cal., succeeding **Frank E. Kalbaugh**, whose promotion to assistant superintendent of

transportation was reported in the *Railway Age* of May 15. **C. N. Armstrong**, terminal trainmaster of the Rio Grande division, has been appointed trainmaster at Tucumcari, N. M.

F. J. Trudeau, trainmaster of the New York Central at Watertown, N. Y., has been appointed supervisor of schedules, with headquarters at Syracuse, N. Y., and **Stephen T. Keiley**, trainmaster at Norwood, N. Y., has been transferred to Watertown, succeeding Mr. Trudeau. **John S. Davis**, trainmaster at Richland, N. Y., has been transferred to Norwood, and **J. V. Cundare** has been appointed trainmaster at Richland.

John L. Close, whose retirement as superintendent of the Spokane division of the Great Northern was reported in the *Railway Age* of June 26, was born at Bradford, Ark., on January 8, 1880, and entered railway service as a brakeman of the Great Northern at Spokane, Wash., in 1908. He subsequently served as conductor, and night yardmaster at various points until 1916 when he was promoted to trainmaster at Spokane, and one year later he was advanced to division superintendent, serving in that capacity on the Kalispell, Havre, Breckenridge, Willmar and Spokane divisions.

TRAFFIC

J. W. Roberts has been appointed division freight and passenger agent of the Seaboard Air Line, with headquarters at Wilmington, N. C. The position of district freight agent, formerly held by Mr. Roberts, has been abolished.

E. D. Davis, assistant freight traffic manager of the Baltimore & Ohio, has been promoted to freight traffic manager, with headquarters as before at Rochester, N. Y., succeeding **H. E. Huntington**, who has retired.

G. W. Sanberg, perishable freight agent of the Chicago Great Western at Chicago, has been promoted to general agent, with headquarters at Dallas, Tex., succeeding **R. J. Williams**, who has been transferred to Detroit, Mich., replacing **F. O. Mooney**, whose death on June 10 was reported in the *Railway Age* of June 19.

Charles Coughlin, chief of tariff bureau of the New York Central, has been appointed assistant general freight agent, with headquarters as before at New York, succeeding **C. I. Johnson**, who has retired after more than forty-two years of service with that road. **L. A. Clapp** has been appointed chief of tariff bureau at New York, succeeding Mr. Coughlin.

H. A. Mintz, tariffs and divisions manager of the Chicago, St. Paul, Minneapolis & Omaha, (part of the Chicago North Western), at St. Paul, Minn., has been promoted to general freight agent of the North Western system, with headquarters at Chicago, succeeding **B. E. Kearney**, whose death on May 21 was reported in the *Railway Age* of May 29. **R. R. Leng**, chief of the tariff bureau of the

Omaha, has been advanced to assistant general freight agent of that road, with headquarters as before at St. Paul.

ENGINEERING & SIGNALING

William J. Bergen, engineering assistant to the president of the New York, Chicago & St. Louis (Nickel Plate), with headquarters at Cleveland, Ohio, has retired from active duty and will serve in an advisory capacity. Mr. Bergen was born at Waterbury, Conn., on February 16, 1872, and graduated in civil engineering from Rennselaer Polytechnic Institute in 1897. From 1889 to 1893 he served as rodman, instrumentman and paving and sewer inspector of the city engineer's office at Waterbury, and from 1897 to 1899 he was rodman, instrumentman and chief computer of the ship canal survey from Oswego, N. Y., to Utica, for the War department. In 1899 Mr. Bergen was appointed assistant engineer of construction of the Burlington & Missouri River (now part of the Chicago, Burlington & Quincy), and later was promoted to division engineer and engineer on construction. In June, 1901, he was appointed assistant engineer of the Nickel Plate, subsequently serving as chief supervisor of track, first assistant to the chief engineer and engineer of grade elimination. During the federal control period, Mr. Bergen served as chief engineer for the corporation. In March, 1920, he was appointed consulting and valuation engineer. In September, 1924, he was advanced to engineering assistant to the president and during the next ten years he was in charge of the road's interest in the Cleveland Terminal development.

MECHANICAL

H. J. Bowyer, acting general locomotive foreman of the Southern Pacific Lines in Texas and Louisiana, has been promoted to superintendent of shops at Houston, Tex., succeeding **A. I. Sellers**, whose promotion to chief assistant superintendent of motive power and equipment is reported elsewhere in these columns.

G. B. Halstead, general foreman, car department, of the Virginian, has been appointed assistant to superintendent motive power, with headquarters as before at Princeton, W. Va., and **E. M. Forbes**, car foreman at Elmore, W. Va., has been appointed general foreman, car department, at Princeton, succeeding Mr. Halstead. **J. R. Keeley**, acting master mechanic at Victoria, Va., has been appointed master mechanic at that point.

J. J. Meyers, supervisor of locomotive maintenance of the New York, Ontario & Western, has been promoted to master mechanic, with headquarters at Middletown, N. Y. **Leroy E. Leonard**, draftsman, has been promoted to shop engineer, with headquarters at Middletown, and **J. E. Pohlman**, erecting shop foreman, has been promoted to general foreman, also with headquarters at Middletown.

George A. Silva, superintendent of the Billerica (Mass.) locomotive repair shops

of the Boston & Maine, has been promoted to superintendent of locomotive maintenance of the Boston & Maine, Maine Central and the Portland Terminal Company, with headquarters at Boston, Mass., and Portland, Me., and **Walter H. Ohnesorge**, assistant superintendent of the locomotive repair shops at Billerica, has been appointed superintendent at that point, succeeding Mr. Silva.

L. H. Rabun, assistant master mechanic of the Chicago, Milwaukee, St. Paul & Pacific at Bensonville, Ill., has been promoted to master mechanic with headquarters at Savanna, Ill., succeeding **J. L. Bossard**, who has been transferred to Chicago, replacing **C. L. Emerson**, who has retired. **G. Blyborg**, general foreman at Minneapolis, Minn., has been advanced to shop superintendent, with the same headquarters, succeeding **H. E. Riccus**, whose death on June 6 is reported elsewhere in these columns.

J. S. Netherwood, assistant superintendent of motive power and equipment of the Southern Pacific Lines in Texas & Louisiana, has been promoted to superintendent of motive power and equipment, with headquarters as before at Houston, Tex., succeeding **J. A. Power**, whose retirement on July 1 was reported in the *Railway Age* of July 3. **A. I. Sellers**, superintendent of shops at Houston, has been advanced to chief assistant superintendent of motive power and equipment, with headquarters as before at Houston, and **D. D. Alton**, assistant master mechanic at El Paso, Tex., has been promoted to assistant superintendent of motive power and equipment, with headquarters at Houston. **P. B. Rice** has been appointed master mechanic at Houston.

W. P. Hartman, mechanical superintendent of the Atchison, Topeka & Santa Fe at Topeka, Kan., has been transferred to Los Angeles, Cal., succeeding **H. S. Wall**, who has retired after 43 years service. Mr. Wall was born at Hamilton, Ont., on August 24, 1874, and entered railway service in October, 1899, as a machinist of the Santa Fe at Albuquerque, N. M. On April 1, 1900, he was appointed roundhouse foreman at Needles, Cal. On July 1 of the same year he was promoted to general foreman at the same place, and on August 15, 1909 he was promoted to division foreman at Barstow, Cal. He remained there until May 1, 1906, when he was promoted to master mechanic at Winslow, Ariz., being transferred on October 21 of the same year to Needles. On July 1, 1909, he was promoted to shop superintendent at San Bernardino, Cal., and in April, 1918, he was advanced to the position he held at the time of his retirement, effective July 1.

William Y. Cherry, whose retirement as general superintendent of motive power of the Western region of the Pennsylvania, with headquarters at Chicago, was reported in the *Railway Age* of July 3, was born in Fort Wayne, Ind., on June 21, 1873, and entered the service of the Pennsylvania as a boilermaker apprentice

LIMA LOCOMOTIVES



ARE HELPING TO HANDLE
**INCREASED
TRAFFIC**

THE Texas and Pacific Ry. Co. serves an area of prime importance in the war effort. * * In 1942 the revenue freight handled was 60.12% over 1941 and ton miles were up 35.58%. * * Thanks to a progressive motive power policy there were available to handle this tremendous load a group of modern Lima-built locomotives that contributed substantially in moving the increased tonnage.

LIMA LOCOMOTIVE WORKS



INCORPORATED, LIMA, OHIO

at Fort Wayne on June 14, 1887. He served in various capacities until 1907, when he became machine shop foreman at Wellsville, Ohio. He was made enginehouse foreman at Allegheny, N. Y. in 1912, and was advanced to master mechanic at Grand Rapids, Mich., in 1917. In



William Y. Cherry

1920, Mr. Cherry was promoted to superintendent of motive power at Cleveland, Ohio, and he was transferred to the Long Island in February, 1928. In October of the same year, he became superintendent of motive power of the New York zone of the Pennsylvania and on December 1, 1936, he was advanced to the position he held at the time of his retirement.

George H. Massy, assistant superintendent of motive power and rolling equipment of the Central of New Jersey, has been appointed superintendent of motive power and rolling equipment, with headquarters as before at Elizabethport, N. J., succeeding **E. P. Gangewere** who has resigned. Mr. Massy was born on April 25, 1889, at Jamaica, British West Indies. He entered the service of the Central of New Jersey as helper apprentice on March



George H. Massy

25, 1908, and was promoted to machinist in 1910. In 1916 he was advanced to assistant foreman, Bayonne (N. J.) enginehouse, and on August 1, 1925, he was promoted to enginehouse foreman at Elizabethport engine terminal. He became general mechanical inspector at New York,

on March 17, 1926, and on March 1, 1929, he was promoted to assistant master mechanic at Communipaw (N. J.) engine terminal. On January 1, 1933, Mr. Massy became division master mechanic in charge of the Central and Southern subdivisions, and in January, 1942, he was promoted to assistant superintendent of motive power and rolling equipment, the position he held at the time of his recent appointment as superintendent of motive power and rolling equipment.

SPECIAL

The general offices of the Lake Terminal Railroad Company are now located in Suite 2515 Grant Building, 330 Grant street, Pittsburgh, Pa.

Charles E. Musser, whose appointment as chief of personnel of the Pennsylvania, with headquarters at Philadelphia, Pa., was announced in the *Railway Age* of July 3, was born on July 19, 1881, at Lancaster, Pa. Mr. Musser entered the service of the Pennsylvania on June 23, 1903, as a freight brakeman on the Maryland division later being transferred



Charles E. Musser

to the New York division. On June 22, 1905, he became passenger brakeman, and on April 26, 1917, he was promoted to passenger conductor. He was appointed assistant superintendent of the labor and wage bureau at Philadelphia in 1928, becoming superintendent of the labor and wage bureau of the Central region at Pittsburgh, Pa., in 1929, and in 1934 he was transferred to the Eastern region, with headquarters at Philadelphia, the position he held at the time of his recent appointment as chief of personnel. Mr. Musser became interested in the labor movement early in his railroad career, and has since been identified with the Brotherhood of Railroad Trainmen, as an officer and as a delegate to several conventions of that brotherhood.

William H. Roehrig, supervisor of car service and demurrage of the Atchison, Topeka & Santa Fe, with headquarters at Chicago, has been granted a leave of absence to serve as associate director of the Office of Defense Transportation's rail-truck coordination division at Chicago.

OBITUARY

Sherman K. Burke, general traffic manager of the Southern Pacific, with headquarters at Chicago, died in a hospital in that city on July 1 after a brief illness. Mr. Burke was born in San Francisco on May 8, 1894, and graduated from



Sherman K. Burke

the University of California in 1917. During World War I he served with the Army, where he was commissioned a captain. He entered railway service in 1924 with the Southern Pacific and served as freight agent; chief clerk, industrial department; assistant general industrial agent, assistant to the general freight traffic manager; assistant general freight agent; and assistant to the vice-president, system freight traffic. In December, 1942, Mr. Burke was promoted to the position he held at the time of his passing.

J. E. Gatham, general agent of the Delaware, Lackawanna & Western, with headquarters at Seattle, Wash., died suddenly in a local hospital on June 30.

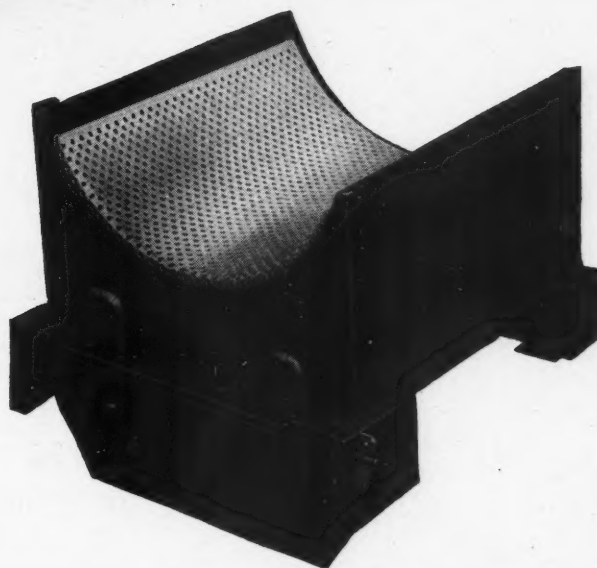
H. E. Riccus, shop superintendent of the Chicago, Milwaukee, St. Paul & Pacific at Minneapolis, Minn., died in that city on June 6.

Philemon S. Lewis, general manager of the Reading at Reading, Pa., died in a hospital at Reading on July 7. He was 54 years old.

Walter Lawrence Stanley, who retired as vice-president and chief public relations officer of the Seaboard Air Line on December 31, 1941, died on July 3, at Wytheville, Va., at the age of 72.

Frederick H. Krick, superintendent of the Cleveland division of the Pennsylvania, whose recent death was reported in the *Railway Age* of July 3, was born at Reading, Pa., on February 13, 1897, and entered railway service on July 15, 1917, as a draftsman of the Pennsylvania at Trenton, N. J. In September, 1920, he was appointed inspector of train service, with headquarters at Harrisburg, Pa., and two years later he was promoted to assistant yardmaster at Philadelphia, later serving in the same capacity at Pittsburgh, Pa., and Toledo, Ohio. On February 16, 1928, Mr. Krick was advanced to trainmaster at Pittsburgh, and on July 1, 1933, he was promoted to the position he held at the time of his death.

**HERE'S A TIME AND
LABOR SAVING DEVICE**



Never has time been so precious. Every hour conserved by reducing maintenance time saves that many hours of productive manpower.

One way to reduce maintenance time — and hence save vital manhours — is through the application of the Franklin No. 8 Driving Box Lubricator and Spreader.

Its steel spreader permits the ready removal of the cellar for cleaning and

repacking by preventing the driving box jaws from closing in and gripping the cellar. By simply removing the end plate, the entire cellar can be removed, and a packed cellar slipped into place. Also by keeping extra driving box cellars packed and ready for application, the repacking of journal boxes can be greatly speeded.

These distinctive features are especially welcomed today, when conservation of manpower hours is so vital.



FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK
CHICAGO

In Canada: FRANKLIN RAILWAY SUPPLY COMPANY, LIMITED, MONTREAL

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MAY AND FIVE MONTHS OF CALENDAR YEAR 1943

Name of road	Av. mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net from railway operation	Net railway operating income	
		Freight	Passenger	Total (inc. misc.)	Maintenance of Way and structures	Equipment	Traffic			1943	1942
Akron, Canton & Youngstown	May 171	\$381,547	\$152	\$400,254	\$53,753	\$36,043	\$95,374	54.5	\$182,279	\$118,455	\$51,992
May 5 mos.	171	1,794,465	578	1,795,043	228,940	156,297	85,792	54.7	849,139	548,380	265,593
Alton	May 959	2,163,915	649,043	2,812,958	361,172	313,946	1,021,231	60.0	1,256,515	427,673	279,387
May 5 mos.	959	10,491,128	3,185,997	13,677,125	1,523,724	2,067,323	4,779,484	58.6	6,278,573	3,430,537	1,304,351
Atchison, Topeka & Santa Fe System	May 13,148	28,576,403	8,817,238	37,393,641	3,851,971	5,100,804	542,089	49.4	20,161,835	6,092,490	5,385,557
May 5 mos.	13,155	132,980,120	38,006,245	170,986,365	17,086,812	24,860,414	46,349,293	50.9	90,162,898	27,341,555	21,439,685
Atlanta & West Point	May 93	258,821	127,425	386,246	39,574	43,896	132,505	57.2	182,307	67,640	51,798
May 5 mos.	93	1,346,961	575,987	1,922,948	189,125	200,418	642,859	54.6	962,770	343,807	165,253
Western of Alabama	May 133	267,956	135,406	403,362	48,901	50,553	127,399	57.4	187,226	62,225	55,275
May 5 mos.	133	1,368,450	615,517	1,983,967	222,550	228,603	648,095	56.5	942,429	330,731	256,025
Atlanta, Birmingham & Coast	May 639	3,883,093	44,603	3,927,696	87,276	75,985	216,210	65.5	225,960	109,485	62,507
May 5 mos.	639	2,795,369	283,969	3,079,338	364,701	371,632	1,068,444	63.9	1,160,812	652,526	112,432
Atlantic Coast Line	May 4,960	9,336,330	3,839,138	13,175,468	1,238,753	1,805,182	215,549	56.0	6,132,959	2,132,959	2,633,216
May 5 mos.	4,977	47,562,873	16,989,916	64,552,789	4,963,986	7,975,657	882,482	48.1	35,442,557	11,942,557	10,306,659
Charleston & Western Carolina	May 343	411,893	13,795	425,688	44,671	60,728	12,551	63.9	152,524	91,051	80,063
May 5 mos.	343	1,825,186	63,645	1,888,831	197,526	250,061	52,568	57.5	816,631	481,831	392,598
Baltimore & Ohio	May 6,150	26,027,414	3,055,373	29,082,787	3,537,918	5,544,262	462,568	65.0	10,684,330	7,031,495	5,070,427
May 5 mos.	6,150	123,321,905	14,401,194	137,723,099	15,664,502	27,097,655	2,234,705	65.3	52,473,330	32,751,319	20,788,165
Staten Island Rapid Transit	May 24	191,422	107,735	299,157	39,161	24,358	98,693	59.1	126,019	86,187	26,088
May 5 mos.	24	980,482	532,071	1,512,553	142,706	143,989	510,305	57.9	653,886	426,461	121,135
Bangor & Aroostook	May 602	349,566	72,016	421,582	121,685	90,374	134,958	85.5	65,125	6,810	48,580
May 5 mos.	602	3,543,167	340,520	3,883,687	97,109	519,231	27,853	55.4	1,794,708	976,151	803,569
Besemer & Lake Erie	May 214	2,064,259	1,761	2,066,020	184,541	790,859	335,828	65.6	715,114	235,209	378,773
May 5 mos.	214	5,988,959	9,208	6,000,167	722,279	3,942,781	1,343,093	103.4	-202,987	-864,301	1,133,286
Boston & Maine	May 1,825	4,946,280	1,453,549	6,399,829	1,108,509	990,866	393,969	66.9	2,343,482	1,369,243	1,109,515
May 5 mos.	1,825	25,164,785	7,097,945	32,262,730	4,963,165	5,242,802	12,181,526	67.4	11,542,097	6,900,104	4,911,476
Burlington, Rock Island	May 2,8	202,052	71,147	273,199	24,129	28,525	2,586	59.4	116,512	105,671	17,371
May 5 mos.	2,28	877,575	309,563	1,187,138	128,760	121,758	12,882	62.0	476,586	419,159	284,439
Cambria & Indiana	May 35	150,510	.....	150,510	16,667	70,227	16,825	73.02	40,621	-51,953	24,600
May 5 mos.	35	839,399	.....	839,399	65,581	357,341	2,503	65.88	286,505	199,429	356,893
Canadian Pacific Lines in Maine	May 234	2,428,855	58,467	2,487,322	83,110	70,481	171,261	55.5	276,107	256,732	104,295
May 5 mos.	234	2,218,537	234,690	2,453,227	258,218	327,410	784,845	56.5	1,113,285	1,011,285	791,092
Canadian Pacific Lines in Vermont	May 90	83,123	9,476	92,599	27,653	26,492	83,398	133.0	-35,799	-44,864	-57,221
May 5 mos.	90	432,553	54,706	487,259	130,071	135,240	434,065	130.9	-172,847	-215,410	-261,012
Central of Georgia	May 1,815	2,191,102	720,069	2,911,171	364,195	430,025	1,034,003	63.6	1,164,422	743,841	696,269
May 5 mos.	1,815	11,205,274	2,958,692	14,163,966	1,615,960	2,013,212	4,873,473	61.2	6,007,710	4,133,081	3,904,726
Central of New Jersey	May 657	4,675,686	640,046	5,315,732	542,784	915,224	2,093,796	67.0	1,839,600	1,137,356	865,529
May 5 mos.	657	21,735,741	3,054,651	24,790,392	4,360,691	6,250,737	10,620,427	70.9	7,631,686	4,328,570	3,006,331
Central Vermont	May 422	680,266	70,000	750,266	125,515	122,759	301,917	72.3	225,553	184,787	105,431
May 5 mos.	422	3,038,116	340,000	3,378,116	519,469	573,073	1,445,483	75.0	907,440	690,052	469,817
Chesapeake & Ohio	May 3,088	14,870,720	1,634,509	16,505,229	1,683,459	3,045,716	3,916,447	53.9	7,941,035	2,709,104	2,636,778
May 5 mos.	3,090	73,267,414	7,397,720	80,665,134	7,819,680	14,079,111	18,924,577	52.8	39,395,379	13,217,839	15,487,357
Chicago & Eastern Illinois	May 912	2,048,964	483,340	2,532,304	304,028	380,782	846,136	61.5	1,056,400	596,400	321,208
May 5 mos.	912	9,706,912	2,449,713	12,156,625	1,282,740	1,802,269	4,140,270	60.3	5,249,256	3,158,256	1,955,104
Chicago & Illinois Midland	May 131	469,608	944	470,552	97,348	73,982	123,719	68.9	153,059	66,398	69,463
May 5 mos.	131	2,537,768	5,938	2,543,706	308,708	375,714	597,309	56.8	1,150,523	396,688	421,073
Chicago & North Western	May 8,100	9,329,471	2,828,283	12,157,754	1,581,269	2,218,091	3,916,478	67.5	4,996,607	2,828,489	2,840,570
May 5 mos.	8,100	44,911,690	11,901,258	56,813,948	7,586,460	10,163,247	19,783,391	64.8	22,125,110	12,572,946	12,291,397
Chicago, Burlington & Quincy	May 9,030	12,433,294	2,433,784	14,867,078	2,586,908	2,080,990	4,261,906	59.2	6,664,744	5,284,097	5,150,009
May 5 mos.	9,032	64,678,843	11,095,604	75,774,447	9,552,677	10,533,840	21,047,778	54.4	37,810,994	21,810,049	20,774,092
Chicago Great Western	May 1,500	6,678,121	225,068	6,903,189	973,557	1,272,724	2,290,265	60.2	995,196	470,173	168,648
May 5 mos.	1,501	10,434,671	1,011,921	11,446,592	1,504,960	1,418,546	4,025,364	61.7	4,689,893	2,364,607	1,027,804
Chicago, Indianapolis & Louisville	May 541	921,144	96,938	1,018,082	160,777	165,469	324,524	66.4	365,674	251,558	212,827
May 5 mos.	541	4,648,785	483,953	5,132,738	860,358	1,056,602	1,468,152	65.2	2,092,624	1,766,554	1,250,558

Table continued on next left-hand page

Railway Age—July 10, 1943

212,867
 532,323
 250,358
 1,434,066
 285,535
 1,700,594
 365,674
 2,078,004
 66.4
 62.2
 721,658
 3,418,802
 324,524
 1,646,125
 31,159
 181,312
 168,469
 857,051
 160,777
 580,328
 1,087,332
 5,496,806
 96,938
 483,593
 931,144
 4,648,785
 541
 5 mos.
 May
 Chicago, Indianapolis & Louisville.....



Get Maximum Work from Each Pound of Coal



Every pound of coal involves scarce man-hours for its production and vital transportation to the point of use. Its economical use is essential.

For over 30 years the fuel savings of the Security Sectional Arch have been universally recognized by railroad men.

But only a complete arch can give the maximum in fuel economy. To this end see that every locomotive leaving the roundhouse has a full length arch.

HARBISON-WALKER REFRACTORIES CO.
Refractory Specialists

AMERICAN ARCH COMPANY, INC.
 60 East 42nd Street, N. Y.

Locomotive Combustion Specialists

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MAY AND FIVE MONTHS OF CALENDAR YEAR 1943—CONTINUED

Av. mileage operated during period	Name of road	Operating revenues			Operating expenses			Operating ratio	Net from railway operation	Net railway operating income			
		Freight	Passenger (inc. misc.)	Total	Maintenance of way and structures	Traffic	Trans- portation			Total	Operating income	1943	1942
10,765	Chicago, Milwaukee, St. Paul & Pacific.....	May	\$13,711,655	\$2,357,172	\$17,672,899	\$2,804,735	\$2,292,357	\$277,462	\$5,000,516	\$10,991,748	\$6,681,151	\$5,084,064	\$2,082,575
10,785	Chicago, Milwaukee, St. Paul & Pacific.....	5 mos.	68,832,821	10,490,127	86,585,559	10,190,540	11,448,464	1,227,030	23,803,819	51,352,237	24,812,322	23,983,893	11,533,476
7,751	Chicago, Rock Island & Pacific.....	May	10,475,518	3,219,910	14,755,169	1,888,682	1,888,682	304,795	4,216,309	8,479,003	6,278,166	4,044,009	1,153,476
7,764	Chicago, Rock Island & Pacific.....	5 mos.	51,679,485	14,946,864	71,826,732	6,435,914	9,163,385	1,537,126	20,544,832	40,307,021	31,519,711	19,020,658	9,766,531
1,624	Chicago, St. Paul, Minneapolis & Omaha.....	May	1,684,597	309,832	2,141,670	294,591	335,550	37,637	786,942	1,531,624	610,046	450,374	205,276
1,626	Chicago, St. Paul, Minneapolis & Omaha.....	5 mos.	8,503,003	1,405,616	10,601,653	1,338,821	1,654,122	198,338	4,183,263	7,745,981	2,855,672	1,921,782	593,649
302	Clinchfield Railroad	May	1,035,398	18,981	1,063,857	94,924	162,595	21,767	212,851	515,158	548,699	439,487	524,605
303	Clinchfield Railroad	5 mos.	5,470,420	67,858	5,582,044	440,118	765,771	108,721	1,082,557	2,507,020	3,075,924	2,499,938	2,288,300
748	Colorado & Southern	May	807,261	286,634	1,193,507	148,254	171,749	15,754	334,855	727,377	466,130	288,265	195,198
748	Colorado & Southern	5 mos.	3,740,617	1,265,072	5,005,689	584,804	787,911	77,448	1,619,043	3,305,110	2,153,776	1,286,712	745,708
804	Fort Worth & Denver City.....	May	640,648	384,880	1,117,551	124,661	119,655	23,174	298,850	612,885	504,666	241,953	108,148
804	Fort Worth & Denver City.....	5 mos.	3,143,661	1,910,938	5,538,191	591,965	549,356	118,232	1,360,300	2,890,702	2,647,489	1,337,397	737,412
42	Colorado & Wyoming.....	May	95,640	.....	148,814	19,638	12,817	899	54,450	92,297	56,517	22,055	28,248
42	Colorado & Wyoming.....	5 mos.	495,745	.....	768,545	69,267	57,178	4,525	282,542	436,624	331,921	115,221	148,218
168	Columbus & Greenville.....	May	94,783	6,451	108,489	34,714	19,123	4,109	39,315	109,594	110,105	-9,042	7,802
168	Columbus & Greenville.....	5 mos.	552,589	33,738	628,331	128,238	97,623	18,265	200,597	505,780	1,225,511	43,711	220
848	Delaware & Hudson	May	3,779,837	142,243	4,012,538	404,170	969,172	44,745	1,249,008	2,768,547	1,243,991	716,690	888,920
848	Delaware & Hudson	5 mos.	18,179,496	743,371	19,416,338	1,931,555	4,504,830	219,933	6,335,882	13,518,175	5,898,163	3,495,042	3,653,949
974	Delaware, Lackawanna & Western.....	May	5,725,576	922,462	7,252,384	701,314	948,955	134,394	2,573,338	4,510,822	2,741,562	1,317,360	1,156,781
980	Delaware, Lackawanna & Western.....	5 mos.	25,951,212	4,205,399	33,196,728	2,906,120	4,627,250	563,527	12,387,358	21,350,383	11,846,345	5,927,345	4,214,623
2,405	Denver & Rio Grande Western.....	May	4,900,725	731,794	5,975,364	470,524	910,170	89,455	1,591,767	3,226,826	2,748,538	1,584,454	1,030,011
2,405	Denver & Rio Grande Western.....	5 mos.	22,969,023	3,817,960	27,918,100	2,074,065	4,477,875	461,438	7,772,834	15,597,243	12,320,857	7,054,147	4,004,816
232	Denver & Salt Lake	May	229,476	7,085	250,215	40,082	50,241	2,523	71,962	175,576	74,639	90,597	70,690
232	Denver & Salt Lake	5 mos.	1,200,043	39,571	1,298,559	187,873	247,662	13,141	400,008	903,480	395,079	464,062	328,588
242	Detroit & Mackinac	May	73,943	15,365	97,327	24,076	16,632	793	35,268	80,527	16,800	1,082	7,429
242	Detroit & Mackinac	5 mos.	308,426	50,066	407,754	75,980	88,220	4,330	151,990	338,846	68,908	17,036	42,916
50	Detroit & Toledo Shore Line.....	May	314,930	.....	316,223	32,517	22,928	8,893	85,184	157,769	158,454	58,480	32,659
50	Detroit & Toledo Shore Line.....	5 mos.	1,944,790	.....	1,951,143	144,581	124,169	45,669	461,943	816,688	1,134,455	429,518	343,857
464	Detroit, Toledo & Ironton	May	692,397	1,310	742,046	93,240	122,257	15,266	185,880	422,280	299,766	155,993	112,490
464	Detroit, Toledo & Ironton	5 mos.	3,976,693	5,355	4,256,499	446,941	545,558	71,987	919,991	2,102,944	2,153,355	1,152,178	833,795
546	Duluth, Missabe & Iron Range.....	May	4,333,376	2,700	5,047,086	369,274	437,678	4,528	793,395	1,642,686	3,404,400	3,030,890	1,162,035
546	Duluth, Missabe & Iron Range.....	5 mos.	5,947,748	15,183	6,932,522	1,574,984	2,328,809	21,224	1,910,413	6,028,210	904,312	186,449	342,297
175	Duluth, Winnipeg & Pacific	May	213,000	2,300	219,500	45,763	34,274	1,906	83,266	169,761	49,739	9,516	22,503
175	Duluth, Winnipeg & Pacific	5 mos.	1,015,000	19,200	1,055,400	169,572	144,519	9,447	424,735	766,435	288,965	89,276	106,390
392	Elgin, Joliet & Eastern	May	2,876,775	14	2,767,265	207,055	804,247	16,489	912,530	2,004,253	763,012	221,427	95,556
392	Elgin, Joliet & Eastern	5 mos.	13,846,603	62	13,805,900	990,646	3,986,286	81,660	4,695,519	10,055,757	3,750,143	1,125,038	596,505
2,242	Erie	May	12,131,639	815,426	13,627,140	1,122,897	2,022,543	207,870	4,181,518	7,915,631	5,711,509	2,736,704	2,068,417
2,242	Erie	5 mos.	56,742,229	3,638,620	63,744,798	4,823,569	10,036,180	1,035,816	20,714,957	38,421,974	25,322,824	8,910,434	8,670,907
682	Florida East Coast	May	1,581,337	3,297,017	301,742	239,766	42,865	713,205	1,406,206	60,730	1,890,811	1,225,967	1,071,736
682	Florida East Coast	5 mos.	8,070,420	6,231,653	15,290,202	1,396,097	1,149,814	206,958	3,604,924	6,950,388	8,339,814	5,459,059	2,546,484
329	Georgia Railroad	May	775,880	135,167	941,635	117,044	103,543	22,505	285,880	548,178	393,457	352,363	259,325
329	Georgia Railroad	5 mos.	3,517,375	781,361	4,325,671	413,804	434,367	108,940	1,409,006	2,483,314	2,042,357	1,902,112	1,156,573
408	Georgia & Florida	May	668,371	5,315	178,390	41,295	22,019	9,692	52,511	131,822	46,568	37,248	7,556
408	Georgia & Florida	5 mos.	760,759	23,907	813,245	196,340	109,826	48,552	256,433	642,250	170,995	124,857	39,287
1,026	Grand Trunk Western	May	2,431,000	277,000	2,888,000	411,167	415,387	36,071	1,029,014	1,988,153	899,847	492,126	315,696
1,026	Grand Trunk Western	5 mos.	12,303,400	1,263,000	14,443,000	1,845,340	2,209,491	175,463	5,150,466	9,858,269	4,584,731	3,003,207	1,100,035
172	Canadian National Lines in New England.....	May	124,800	5,900	132,300	62,929	25,938	2,453	94,093	213,340	81,343	-119,866	-97,285
172	Canadian National Lines in New England.....	5 mos.	614,500	31,900	738,600	240,487	141,305	12,195	448,882	940,616	-202,016	-303,531	-287,875
8,118	Great Northern	May	13,806,303	1,360,184	16,526,207	2,525,852	2,708,590	209,134	3,790,815	9,693,622	6,832,585	2,758,725	2,635,693
8,118	Great Northern	5 mos.	57,414,809	6,021,130	68,597,967	10,433,371	13,977,965	1,052,519	18,255,980	45,608,872	22,989,095	3,160,321	1,100,035
234	Green Bay & Western	May	1,066,089	2,523	1,106,765	221,947	90,815	39,354	294,806	682,448	94,856	70,148	21,744
234	Green Bay & Western	5 mos.	5,330,486	518	5,848,464	56,505	142,991	60,1	94,856	70,148	64,853	303,472	151,681
259	Gulf & Ship Island	May	140,517	43,258	205,836	93,980	22,005	2,862	111,561	239,412	116,581	55,069	20,976
259	Gulf & Ship Island	5 mos.	825,746	230,270	1,159,406	378,492	176,351	14,289	455,486	1,022,500	36,581	-14,069	-101,913

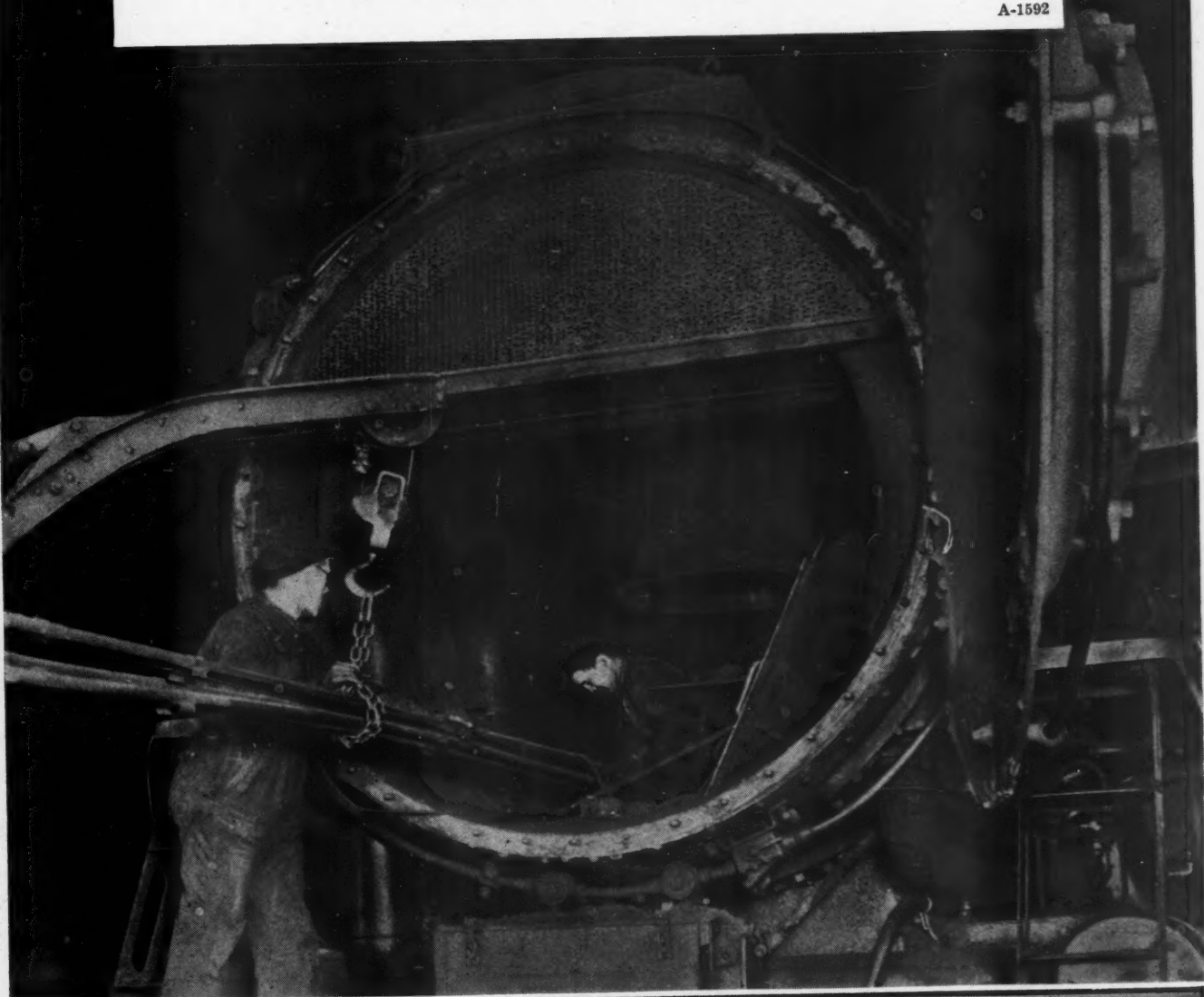
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Railway Age—July 10, 1943

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THE SUPERHEATER COMPANY, LTD.

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MAY AND FIVE MONTHS OF CALENDAR YEAR 1943—CONTINUED

Name of road	Av. mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net from railway operation	Net railway operating income		
		Freight	Passenger	Total (inc. misc.)	Maintenance of way and structures	Equipment	Traffic			Operating income	1943	1942
Gulf, Mobile & Ohio	May	\$2,730,381	\$247,415	\$3,075,122	\$510,239	\$463,053	\$79,753	64.8	\$1,081,859	\$526,569	\$331,962	\$499,462
Illinois Central	5 mos.	14,864,035	1,059,205	16,411,556	2,313,342	2,313,342	404,514	59.5	6,641,734	3,221,419	2,191,960	2,733,114
May		14,419,122	1,059,205	16,411,556	2,313,342	2,313,342	404,514	59.5	6,641,734	3,221,419	2,191,960	2,733,114
Yazoo & Mississippi Valley	5 mos.	69,495,696	12,137,114	86,732,410	13,055,938	15,683,875	1,036,909	68.4	5,749,447	3,141,163	2,711,572	2,667,106
May		3,553,775	297,021	4,003,203	383,682	696,507	42,693	65.7	29,742,687	16,642,404	14,667,428	9,895,430
Illinois Central System	5 mos.	14,153,752	1,517,119	16,370,825	2,191,968	1,918,374	203,574	48.4	2,065,184	1,155,977	987,309	713,574
May		14,153,752	1,517,119	16,370,825	2,191,968	1,918,374	203,574	48.4	2,065,184	1,155,977	987,309	713,574
Illinois Terminal	5 mos.	83,649,448	13,654,233	103,103,235	15,255,906	17,602,249	1,240,483	56.5	7,814,631	4,294,894	3,394,503	3,984,503
May		83,649,448	13,654,233	103,103,235	15,255,906	17,602,249	1,240,483	56.5	7,814,631	4,294,894	3,394,503	3,984,503
Kansas City Southern	May	506,089	170,278	752,559	90,150	74,842	18,230	58.51	312,262	131,003	112,774	211,469
5 mos.		506,089	170,278	752,559	90,150	74,842	18,230	58.51	312,262	131,003	112,774	211,469
May		2,657,551	871,948	3,870,796	427,244	403,975	91,544	56.62	1,679,130	640,628	572,193	769,195
5 mos.		2,657,551	871,948	3,870,796	427,244	403,975	91,544	56.62	1,679,130	640,628	572,193	769,195
Kansas, Oklahoma & Gulf	May	14,950,105	1,730,228	17,710,354	2,808,762	3,953,310	55,739	58.8	1,245,606	460,606	222,673	816,807
5 mos.		14,950,105	1,730,228	17,710,354	2,808,762	3,953,310	55,739	58.8	1,245,606	460,606	222,673	816,807
Lake Superior & Ishpeming	May	197,860	1,115	201,882	66,930	17,354	9,479	55.5	7,883,478	4,016,478	2,769,259	2,811,288
5 mos.		197,860	1,115	201,882	66,930	17,354	9,479	55.5	7,883,478	4,016,478	2,769,259	2,811,288
May		1,647,194	5,944	1,670,439	239,025	88,891	48,527	84.1	32,165	35,272	1,583	77,212
5 mos.		1,647,194	5,944	1,670,439	239,025	88,891	48,527	84.1	32,165	35,272	1,583	77,212
Lehigh & Hudson River	May	260,451	338,162	598,613	34,199	204,389	574	47.6	874,946	536,156	397,916	251,323
5 mos.		260,451	338,162	598,613	34,199	204,389	574	47.6	874,946	536,156	397,916	251,323
Lehigh & New England	May	437,007	838	590,571	144,601	204,389	3,175	40.1	202,390	183,965	188,873	156,992
5 mos.		437,007	838	590,571	144,601	204,389	3,175	40.1	202,390	183,965	188,873	156,992
Lehigh Valley	May	242,486	563	244,248	37,735	28,007	67,159	98.1	1,386	108,876	67,686	213,411
5 mos.		242,486	563	244,248	37,735	28,007	67,159	98.1	1,386	108,876	67,686	213,411
May		1,394,551	2,093	1,401,453	152,312	147,930	21,100	59.0	99,997	46,637	24,693	36,390
5 mos.		1,394,551	2,093	1,401,453	152,312	147,930	21,100	59.0	99,997	46,637	24,693	36,390
Louisiana & Arkansas	May	553,151	.....	553,151	50,285	106,756	6,986	53.1	657,243	277,027	151,736	214,198
5 mos.		553,151	.....	553,151	50,285	106,756	6,986	53.1	657,243	277,027	151,736	214,198
May		2,584,277	.....	2,584,277	220,914	553,302	33,559	58.0	233,181	118,289	111,939	111,939
5 mos.		2,584,277	.....	2,584,277	220,914	553,302	33,559	58.0	233,181	118,289	111,939	111,939
Louisville & Nashville	May	6,416,480	614,714	7,494,666	1,028,923	1,426,909	139,770	63.3	716,365	1,339,105	594,597	478,536
5 mos.		6,416,480	614,714	7,494,666	1,028,923	1,426,909	139,770	63.3	716,365	1,339,105	594,597	478,536
May		31,721,317	2,442,367	36,638,688	3,879,645	6,104,394	571,436	73.0	2,022,114	1,303,654	875,128	733,728
5 mos.		31,721,317	2,442,367	36,638,688	3,879,645	6,104,394	571,436	73.0	2,022,114	1,303,654	875,128	733,728
Maine Central	May	1,317,527	131,739	1,705,770	382,811	180,555	30,020	66.3	12,345,092	7,496,334	5,516,067	3,579,650
5 mos.		1,317,527	131,739	1,705,770	382,811	180,555	30,020	66.3	12,345,092	7,496,334	5,516,067	3,579,650
Midland Valley	May	7,237,063	597,402	8,128,133	1,828,471	839,442	131,524	57.6	3,448,756	1,339,105	999,535	1,033,278
5 mos.		7,237,063	597,402	8,128,133	1,828,471	839,442	131,524	57.6	3,448,756	1,339,105	999,535	1,033,278
May		12,864,427	3,820,120	17,620,088	1,628,796	2,642,153	211,616	56.8	7,606,327	1,973,551	2,211,859	1,331,259
5 mos.		12,864,427	3,820,120	17,620,088	1,628,796	2,642,153	211,616	56.8	7,606,327	1,973,551	2,211,859	1,331,259
May		63,555,552	18,059,502	86,063,075	12,825,439	1,008,239	1,008,239	55.4	38,409,852	9,810,260	10,989,234	8,363,360
5 mos.		63,555,552	18,059,502	86,063,075	12,825,439	1,008,239	1,008,239	55.4	38,409,852	9,810,260	10,989,234	8,363,360
Minneapolis & St. Louis	May	116,501	21	118,775	32,440	13,469	2,054	65.1	2,768,525	1,525,884	1,351,237	1,123,160
5 mos.		116,501	21	118,775	32,440	13,469	2,054	65.1	2,768,525	1,525,884	1,351,237	1,123,160
May		753,479	1,724	769,411	102,432	61,838	36,835	75.3	29,358	27,492	22,218	30,840
5 mos.		753,479	1,724	769,411	102,432	61,838	36,835	75.3	29,358	27,492	22,218	30,840
Minneapolis, St. Paul & Sault Ste. Marie	May	1,071,410	24,700	1,136,756	199,842	161,945	58,647	51.4	373,642	259,470	221,279	131,846
5 mos.		1,071,410	24,700	1,136,756	199,842	161,945	58,647	51.4	373,642	259,470	221,279	131,846
Duluth, South Shore & Atlantic	May	5,625,787	140,949	5,972,398	834,124	808,163	295,586	71.0	329,457	266,456	259,474	113,308
5 mos.		5,625,787	140,949	5,972,398	834,124	808,163	295,586	71.0	329,457	266,456	259,474	113,308
Spokane International	May	3,192,045	217,233	3,696,480	589,314	606,007	68,841	70.1	1,106,746	704,398	713,455	559,789
5 mos.		3,192,045	217,233	3,696,480	589,314	606,007	68,841	70.1	1,106,746	704,398	713,455	559,789
May		15,319,606	935,163	17,467,231	2,616,803	2,967,309	344,355	74.2	4,511,181	2,772,363	2,703,955	1,897,917
5 mos.		15,319,606	935,163	17,467,231	2,616,803	2,967,309	344,355	74.2	4,511,181	2,772,363	2,703,955	1,897,917
Mississippi Central	May	304,601	27,708	361,045	47,282	47,282	7,133	63.8	130,835	112,218	111,304	68,244
5 mos.		304,601	27,708	361,045	47,282	47,282	7,133	63.8	130,835	112,218	111,304	68,244
Missouri & Arkansas	May	1,381,729	116,487	1,606,838	266,893	250,242	38,709	73.7	422,373	325,512	299,646	275,453
5 mos.		1,381,729	116,487	1,606,838	266,893	250,242	38,709	73.7	422,373	325,512	299,646	275,453
Missouri, Illinois	May	156,967	6,053	170,371	35,377	8,773	3,214	56.7	73,838	34,268	24,930	43,686
5 mos.		156,967	6,053	170,371	35,377	8,773	3,214	56.7	73,838	34,268	24,930	43,686
May		833,903	28,794	904,845	132,495	43,164	14,999	45.6	492,608	191,475	151,890	105,290
5 mos.		833,903	28,794	904,845	132,495	43,164	14,999	45.6	492,608	191,475	151,890	105,290
Missouri-Kansas-Texas Lines	May	129,132	12,113	144,211	35,186	14,642	3,096	68.1	46,033	29,369	21,660	30,202
5 mos.		129,132	12,113	144,211	35,186	14,642	3,096	68.1	46,033	29,369	21,660	30,202
Missouri Pacific	May	679,590	33,828	725,640	134,991	72,697	42,885	60.7	284,923	178,330	140,458	118,624
5 mos.		679,590	33,828	725,640	134,991	72,697	42,885	60.7	284,923	178,330	140,458	118,624
International Great Northern	May	159,289	3,117	169,478	72,220	21,870	8,266	78.8	199,140	131,884	55,741	11,919
5 mos.		159,289	3,117	169,478	72,220	21,870	8,266	78.8	199,140	131,884	55,741	11,919
May		886,344	14,616	940,385	248,289	98,282	36,298	60.6	93,108	26,323	19,534	67,006
5 mos.		886,344	14,616	940,385	248,289	98,282	36,298	60.6	93,108	26,323	19,534	67,006
Monongahela	May	1,264,548	1,687	1,273,683	164,497	16,982	16,733	53.8	588,567	215,642	174,111	257,650
5 mos.		1,264,548	1,687	1,273,683	164,497	16,982	16,733	53.8	588,567	215,642	174,111	257,650
May		3,471,736	778,826	4,661,127	1,819,021	785,741	126,376	99.1	41,892	225,118	565,003	483,778
5 mos.		3,471,736	778,826	4,661,127	1,819,021	785,741	126,376	99.1	41,892	225,118	565,003	483,778
May		23,316,279	4,920,274	30,428,620	7,884,014	3,941,289	614,674	74.2	7,960,873	4,922,600	2,512,025	2,943,418
5 mos.		23,316,279	4,920,274	30,428,620	7,884,014	3,941,289	614,674	74.2	7,960,873	4,922,600	2,512,025	2,943,418
Gulf Coast Lines	May	13,904,881	2,985,709	18,114,486	2,116,597	3,009,934	4,996,485	57.2	7,751,575	3,991,665	3,125,207	4,188,246
5 mos.		13,904,881	2,985,709	18,114,486	2,116,59							

REVENUES AND EXPENSES OF RAILWAYS

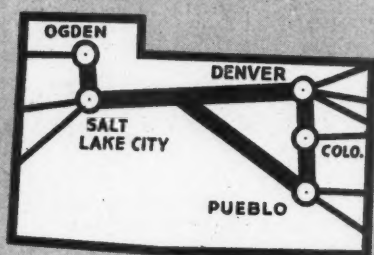
MONTH OF MAY AND FIVE MONTHS OF CALENDAR YEAR 1943—CONTINUED

Name of road	Av. mileage operated during period	Operating revenues			Operating expenses			Net from railway operation	Net railway operating income	
		Freight	Passenger	Total (inc. misc.)	Maintenance of way and structures	Traffic	Trans- portation		Operating income	1942
Montour	51	\$247,698	.....	\$250,954	\$16,673	\$989	\$61,560	\$133,418	\$37,003	\$83,383
Nashville, Chattanooga & St. Louis	5 mos.	1,166,116	1,175,539	66,404	263,084	4,588	318,605	318,581	135,856	301,526
Nashville, Chattanooga & St. Louis	May	2,592,484	\$577,053	3,388,289	394,217	77,721	1,004,707	2,143,723	473,647	431,101
Nashville, Chattanooga & St. Louis	5 mos.	12,257,086	2,985,950	16,405,534	1,786,215	373,207	4,731,106	9,985,765	6,419,769	2,699,304
Nashville, Chattanooga & St. Louis	May	54,634	1,012	58,155	15,871	1,206	9,567	34,636	23,519	11,239
Nashville, Chattanooga & St. Louis	5 mos.	265,975	5,455	283,727	56,519	5,984	47,074	146,863	48,167	59,450
Nashville, Chattanooga & St. Louis	May	1,093,696	13,451	1,107,147	67,433	6,159	18,350	1,122,710	9,330,411	7,758,212
Nashville, Chattanooga & St. Louis	5 mos.	200,470,346	55,956,189	281,988,224	31,705,756	3,122,699	91,139,297	181,203,520	100,784,704	38,513,932
Pittsburgh & Lake Erie	231	2,943,118	104,188	3,133,442	299,871	41,172	789,801	2,091,218	121,928	602,249
Pittsburgh & Lake Erie	5 mos.	13,937,149	486,193	14,866,442	1,310,955	203,962	4,004,732	10,202,630	4,663,812	2,893,762
Pittsburgh & Lake Erie	May	7,896,731	230,175	8,268,312	742,630	127,497	2,283,437	5,840,265	1,369,616	1,118,666
Pittsburgh & Lake Erie	5 mos.	39,817,602	1,016,594	41,539,529	3,313,634	645,568	11,630,576	21,565,786	19,973,743	5,734,893
New York, New Haven & Hartford	1,838	8,301,990	15,378,150	17,330,838	2,201,338	221,671	4,392,011	8,896,216	4,360,729	3,301,153
New York, New Haven & Hartford	5 mos.	39,996,655	26,858,322	72,292,266	7,537,134	707,750	22,062,878	42,805,039	29,487,227	14,067,603
New York, New Haven & Hartford	May	21,117,174	.....	21,117,174	75,794	.....	44,418	138,686	109,187	132,621
New York, New Haven & Hartford	5 mos.	1,005,171	.....	1,005,171	73,296	.....	221,349	653,002	56,420	77,129
New York, Ontario & Western	546	586,841	50,837	680,343	90,257	23,105	309,190	587,349	92,994	26,986
New York, Ontario & Western	5 mos.	2,299,274	135,406	3,166,694	420,535	109,006	1,543,090	2,881,709	117,339	14,938
New York, Ontario & Western	May	1,344,506	37,982	1,488,652	32,081	4,233	1,133,361	1,440,720	175,460	112,920
New York, Ontario & Western	5 mos.	2,136,540	190,112	2,447,145	155,499	19,618	834,434	1,270,047	1,177,098	462,187
Norfolk & Western	2,156	11,200,805	1,184,371	12,705,383	1,211,057	172,891	2,836,884	7,053,587	1,261,855	1,943,318
Norfolk & Western	5 mos.	56,290,132	5,820,643	64,030,734	6,038,815	854,892	14,016,745	34,809,934	6,155,335	9,768,135
Norfolk & Western	May	734	644,854	20,519	683,570	29,648	206,150	503,085	180,485	84,079
Norfolk & Western	5 mos.	3,095,785	117,960	3,325,316	747,974	147,855	1,024,759	2,432,852	539,317	404,038
Northern Pacific	6,868	9,223,217	1,260,861	11,397,850	1,431,076	171,003	3,055,333	7,086,863	2,158,775	2,467,058
Northern Pacific	5 mos.	44,807,825	5,364,267	54,564,274	6,710,110	844,266	15,485,231	34,891,716	19,672,558	11,666,007
Northern Pacific	May	331	539,385	12,986	571,976	2,954	162,403	378,854	193,122	170,610
Northern Pacific	5 mos.	2,246,797	59,156	2,399,407	772,659	12,459	725,936	1,812,140	587,267	473,498
Northwestern Pacific	132	92,960	231	94,568	18,171	1,012	21,388	48,072	46,496	29,506
Northwestern Pacific	5 mos.	565,766	814	575,146	89,504	5,946	139,171	276,855	298,291	180,387
Northwestern Pacific	May	10,180	56,485,382	20,066,443	84,331,687	964,815	29,582,828	54,361,296	29,770,391	13,983,056
Northwestern Pacific	5 mos.	267,119,348	90,713,562	387,937,642	41,517,085	4,648,513	145,731,851	271,826,935	116,110,707	48,699,272
Long Island	378	1,233,205	2,228,702	3,607,367	484,230	35,838	1,400,651	2,433,278	1,174,089	768,736
Long Island	5 mos.	5,448,526	9,662,658	15,857,600	2,762,417	187,189	7,098,674	12,747,514	3,110,086	1,595,872
Long Island	May	510,879	397,567	938,131	145,060	7,813	410,583	701,463	236,668	136,494
Long Island	5 mos.	2,375,626	1,438,820	3,957,825	747,776	36,046	2,063,158	3,528,262	429,563	—35,984
Pere Marquette	2,009	4,065,651	288,334	4,546,826	615,940	68,721	1,469,184	3,089,616	1,457,210	580,176
Pere Marquette	5 mos.	20,027,029	1,347,259	22,357,749	2,758,186	336,880	7,376,472	14,926,640	3,415,025	3,009,024
Pere Marquette	May	97	129,473	129,473	58,443	.....	13,641	91,357	78,500	22,296
Pere Marquette	5 mos.	572,359	.....	572,359	95,587	9,705	150,326	387,908	185,959	116,414
Pittsburgh & West Virginia	136	718,032	17	735,523	91,432	19,373	172,062	417,590	317,933	187,218
Pittsburgh & West Virginia	5 mos.	3,258,191	96	3,353,119	425,246	96,651	863,827	2,047,251	1,305,868	808,233
Pittsburgh & West Virginia	May	190	119,763	.....	121,594	1,271	44,432	95,625	25,969	19,502
Pittsburgh & West Virginia	5 mos.	604,699	.....	604,699	614,698	5,213	222,174	473,541	141,157	109,570
Reading	1,418	8,355,745	822,503	9,653,937	1,043,590	79,008	3,195,627	6,383,515	3,270,422	1,752,106
Reading	5 mos.	42,497,914	3,836,540	48,675,534	4,805,571	403,078	16,193,164	31,871,210	16,858,324	9,773,686
Reading	May	1,118	1,772,105	3,267,770	1,607,644	12,642	720,736	1,291,485	1,976,285	521,893
Reading	5 mos.	8,122,487	6,071,938	15,380,404	746,640	58,008	3,615,990	6,149,198	9,231,206	2,683,554
Richmond, Fredericksburg & Potomac	407	258,703	49,449	368,524	60,492	11,064	178,618	344,095	24,429	5,738
Richmond, Fredericksburg & Potomac	5 mos.	1,242,375	200,142	1,442,517	187,216	34,693	891,360	1,643,613	173,603	56,444
Richmond, Fredericksburg & Potomac	May	4,665	5,756,207	1,803,291	7,874,966	150,355	2,728,246	5,938,899	2,076,067	1,364,647
Richmond, Fredericksburg & Potomac	5 mos.	30,066,122	8,333,189	41,319,785	4,598,286	743,182	13,152,494	27,364,841	13,954,944	9,020,862
St. Louis-San Francisco	159	309,586	6,276	322,608	46,725	11,367	88,440	178,050	144,558	95,006
St. Louis-San Francisco	5 mos.	1,599,102	131,039	1,766,841	180,694	49,191	469,337	869,983	896,858	565,452
St. Louis, San Francisco & Texas	159	309,586	6,276	322,608	46,725	11,367	88,440	178,050	144,558	95,006
St. Louis, San Francisco & Texas	5 mos.	1,599,102	131,039	1,766,841	180,694	49,191	469,337	869,983	896,858	565,452

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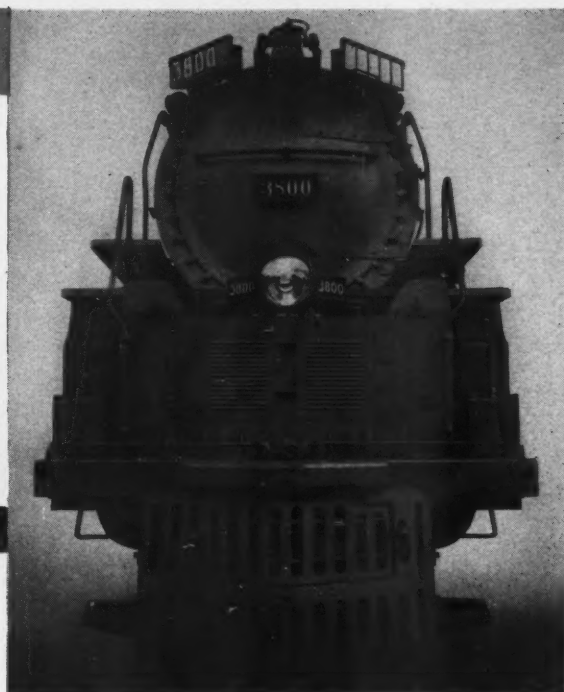
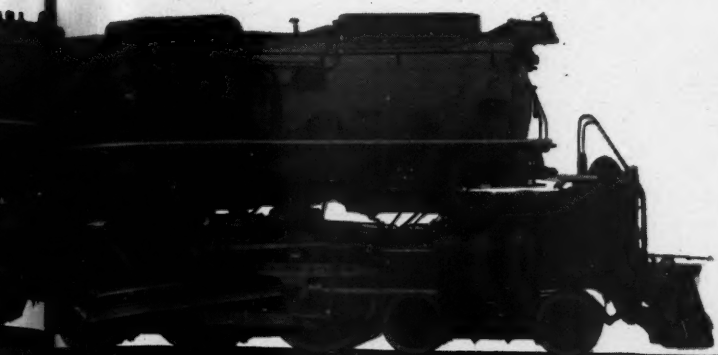


KEEPING PACE



Rio Grande

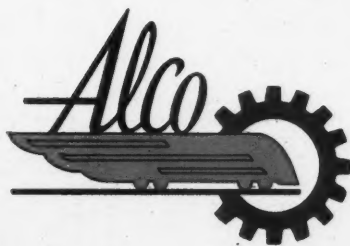




WITH THE

NATION'S NEEDS

Keeping pace with the Nation's needs, the Denver & Rio Grande Western has recently put into operation six Alco 4-6-6-4's. Incidentally, this adds another road to the list of those who have taken advantage of the capabilities of this high-speed, heavy-tonnage locomotive.



AMERICAN LOCOMOTIVE

MANUFACTURERS OF MOBILE POWER

STEAM, DIESEL AND ELECTRIC LOCOMOTIVES, MARINE
DIESELS, TANKS, GUN CARRIAGES & OTHER ORDNANCE

Locomotive Characteristics

Weight on Drivers	405,500 Lb.
Weight of Engine	630,000 Lb.
Cylinders (Four)	21 x 32 Ins.
Diameter of Drivers	69 Ins.
Boiler Pressure	280 Lb.
Tractive Power	97,350 Lb.
Tender Capacity—Water	25,000 Gals.
Tender Capacity—Fuel	28 Tons

★ ★ BUY U.S. WAR BONDS AND STAMPS ★ ★



REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MAY AND FIVE MONTHS OF CALENDAR YEAR 1943—CONTINUED

Name of road	Av. mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net from railway operation	Net railway operating income		
		Freight	Passenger	Total	Maintenance of way and structures	Traffic	Transportation			Operating income	1943	1942
St. Louis Southwestern Lines	May	\$4,781,479	\$283,378	\$5,194,947	\$394,068	\$510,016	\$99,785	\$1,303,514	\$2,423,551	\$2,560,848	\$2,254,714	\$869,558
5 mos.		1,617	23,687,825	1,366,076	25,662,883	2,251,224	487,218	3,959,623	11,146,862	6,678,819	5,238,724	3,477,394
Seaboard Air Line	May	8,178,102	3,194,333	12,032,973	1,185,878	1,547,233	228,228	3,194,405	6,389,987	3,942,991	3,450,469	3,074,929
5 mos.		4,181	40,142,378	16,628,991	60,301,563	5,556,851	7,164,163	16,181,001	33,191,202	21,410,356	18,518,067	10,038,329
Southern Railway	May	14,996,283	5,374,011	21,532,206	2,068,088	2,960,224	202,478	5,072,482	10,889,241	3,812,933	3,583,801	3,908,032
5 mos.		6,514	73,089,735	22,031,915	100,968,496	10,079,100	13,879,972	24,962,588	52,770,758	15,713,971	14,400,324	14,256,351
Alabama Great Southern	May	1,586,533	388,409	2,066,366	151,665	286,442	23,713	534,936	1,048,498	295,935	218,703	220,222
5 mos.		315	7,115,050	1,829,859	9,394,804	695,695	1,274,818	119,736	4,772,553	1,454,853	1,093,508	905,063
Cincinnati, New Orleans & Texas Pacific	May	2,504,670	482,735	3,124,471	242,847	540,889	35,758	710,842	1,614,422	563,348	548,264	371,555
5 mos.		337	11,932,456	2,581,324	15,170,071	1,279,113	2,481,965	341,136	7,366,343	2,539,448	2,402,386	1,989,644
Georgia Southern & Florida	May	397,379,432	231,258	661,287	69,152	52,996	2,440	184,243	322,559	140,085	108,171	76,455
5 mos.		397	1,752,027	1,118,958	3,110,932	343,253	264,624	853,950	1,552,533	622,571	437,555	257,949
New Orleans & Northeastern	May	968,287	205,931	1,221,917	89,977	123,892	11,791	294,407	553,824	192,108	101,902	123,587
5 mos.		204	4,569,122	980,381	5,806,026	431,232	595,788	1,354,180	2,528,523	1,077,633	665,346	720,444
Southern Pacific Co.	May	29,445,586	7,888,151	40,513,903	4,295,287	5,955,920	512,674	10,496,928	23,119,504	3,689,275	4,218,635	4,992,850
5 mos.		8,325	131,774,233	36,244,319	183,269,073	19,712,108	26,657,201	50,548,857	110,233,537	53,035,536	27,902,610	23,260,643
Texas & New Orleans	May	8,152,399	2,065,292	10,788,260	1,067,240	1,107,514	135,184	2,559,902	5,190,250	3,096,312	2,531,981	1,702,264
5 mos.		4,341	41,552,013	9,889,619	54,242,714	5,397,876	702,893	12,383,675	25,492,478	14,969,308	12,184,143	6,999,477
Spokane, Portland & Seattle	May	1,824,315	162,636	2,101,471	247,933	122,432	13,194	607,470	1,045,746	776,921	605,780	439,807
5 mos.		929	8,077,986	706,627	9,426,007	596,955	62,007	2,724,207	4,638,623	3,950,708	3,041,341	1,940,281
Tennessee Central	May	309,604	37,866	366,648	79,508	49,642	6,780	109,445	260,573	75,883	63,987	49,162
5 mos.		286	1,535,173	193,624	1,825,524	383,151	524,292	560,014	1,307,750	715,707	521,774	341,637
Texas & Pacific	May	3,716,632	1,634,373	5,391,005	457,557	1,012,825	110,525	1,526,996	3,723,884	745,905	721,807	628,798
5 mos.		1,898	17,182,451	8,120,899	27,675,631	3,476,561	4,188,523	6,567,264	15,917,396	4,063,510	3,754,804	3,322,612
Texas Mexican	May	81,550	681	102,659	28,364	12,767	4,028	42,059	96,059	6,143	—16,762	71,520
5 mos.		162	744,601	4,370	123,644	64,123	19,253	98,489	452,142	285,550	239,424	242,102
Toledo, Peoria & Western	May	448,919	5	452,236	45,557	17,999	78,105	78,105	186,517	251,907	235,584	101,037
5 mos.		239	1,934,330	402	1,972,535	192,442	89,314	368,094	820,507	1,084,440	1,000,850	81,511
Union Pacific System	May	29,221,007	7,186,198	39,127,244	5,657,616	6,778,894	471,336	9,546,968	23,981,346	4,837,409	3,920,900	2,513,631
5 mos.		9,835	136,439,287	31,066,261	180,667,382	30,778,060	46,122,247	111,170,857	267,633,074	26,763,074	22,134,491	11,159,907
Utah	May	111	112,240	.....	112,304	12,089	351	30,475	86,224	12,895	12,923	15,556
5 mos.		111	626,791	.....	626,906	202,554	2,232	161,064	469,276	12,895	76,243	38,511
Virginian	May	2,079,220	7,830	2,158,728	229,237	444,820	24,074	386,589	1,135,054	458,674	590,110	672,423
5 mos.		657	10,821,994	37,577	11,266,570	1,047,492	2,053,302	576,716	5,766,716	2,482,884	3,072,228	3,198,163
Wabash	May	6,655,111	834,835	7,494,650	870,655	929,430	183,195	2,372,959	4,604,399	1,441,680	1,027,982	793,767
5 mos.		2,393	32,636,280	3,842,502	38,513,568	3,781,270	880,624	11,604,619	21,977,203	7,070,043	4,923,448	3,589,057
Ann Arbor	May	522,769	7,571	541,073	45,284	84,763	16,147	193,503	351,795	106,821	97,655	41,726
5 mos.		294	2,377,311	32,790	2,458,292	411,689	81,109	957,317	1,723,161	413,452	385,288	182,109
Western Maryland	May	2,684,044	27,561	2,711,605	405,749	616,190	46,629	722,181	1,867,678	548,765	536,784	339,937
5 mos.		845	14,366,807	118,990	14,907,754	2,861,633	3,770,589	8,963,420	5,944,334	3,509,334	3,545,542	2,559,276
Western Pacific	May	3,382,699	480,077	4,000,096	332,732	479,212	73,813	1,049,219	2,056,028	1,189,771	1,042,105	833,335
5 mos.		1,195	18,865,559	1,595,688	17,070,614	1,656,376	3,743,939	5,081,046	9,819,205	4,592,077	3,793,060	3,018,934
Wheeling & Lake Erie	May	2,302,037	.....	2,302,037	242,538	409,267	41,748	663,321	1,399,150	194,311	336,810	243,420
5 mos.		507	10,908,965	.....	11,236,102	1,842,140	199,536	3,002,169	6,362,409	1,437,337	1,527,366	1,077,562